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ABSTRACT

Presented is an annual progress report of Project MORE (Mediated Operational Research for Education), a research project developing multimedia instructional programs aimed at specific behavioral deficits among handicapped children, with emphasis on self-care skills for the mentally retarded and articulation therapy in public schools. Major activities and accomplishments, problems, significant findings and events, dissemination activities, capital equipment acquisitions, data collection, other activities, staff utilization, and future activities planned for the next reporting period are recorded for each of four areas of the project: Curriculum Materials for the Mentally Retarded; Research, Development, and Dissemination of Programs for Improved Instructional Technology for Articulation Therapy in Public Schools; Media Support Services; and Systems Analysis. Data provided includes pre- and post-test results of such self-care skills programs as feminine shaving and face shaving, and findings resulting from studies of such programs as the stimulus shift generalization program, the parent-aide-paraprofessional program, and the response development program. (IM)

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FINAL PROGRESS REPORT

Project No. 26-2364
Grant or Contract No. OEG-0-71-0449(607)

PROGRAMMATIC RESEARCH TO DEVELOP AND DISSEMINATE IMPROVED INSTRUCTIONAL TECHNOLOGY FOR HANDICAPPED CHILDREN

Richard L. Schiefelbusch
and
James R. Lent

The University of Kansas, Bureau of Child Research
and
The Parsons State Hospital and Training Center

Parsons, Kansas

January 31, 1973

The research reported herein was performed pursuant to a grant with the Bureau of Education for the Handicapped, U.S. Office of Education, Department of Health, Education, and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official position of the Bureau of Education for the Handicapped.

Department of Health, Education, and Welfare

U.S. Office of Education
Bureau of Education for the Handicapped

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Name of Institution: The University of Kansas, Bureau of Child Research
and
The Parsons State Hospital and Training Center

Name of Project Director(s): Richard L. Schiefelbusch
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James R. Lent

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for the Handicapped
Division of Research

Title of Project: PROGRAMMATIC RESEARCH
TO DEVELOP AND DISSEMINATE
IMPROVED INSTRUCTIONAL TECHNOLOGY
FOR HANDICAPPED CHILDREN

1. Major Activities and Accomplishments During this Period
2. Problems
3. Significant Findings and Events
4. Dissemination Activities
5. Capital Equipment Acquisitions
6. Data Collection
7. Other Activities
8. Staff Utilization
9. Future Activities Planned for Next Reporting Period
10. Certification

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James R Lent

Signature of Contract Officer

Signatures of Principal Investigators

Date

January 31, 1973
Date

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PROJECT
MORE
Mediated Operational Research for Education
James R. Lent, Director

Bureau of Child Research, University of Kansas at Parsons State Hospital and Training Center, Parsons, Kansas 67357

INTRODUCTION

Project MORE is directed toward the development of instructional programs aimed at specific behavioral deficits among handicapped children. The instructional programs are being: 1) empirically validated; 2) organized through the application of systems technology; 3) implemented by optimal, multimedia materials; and 4) disseminated in a way which assures immediate application in educational environments by virtue of their systematic nature and their multimedia format.

This Project is organized to accomplish these objectives through the use of Systems for organization, the Central Office for administrative support, Media for implementation, and through the two programmatic research projects: 1) Curriculum Materials for the Mentally Retarded, conducted by James R. Lent, Ed.D.; and 2) Research, Development, and Dissemination of Programs for Improved Instructional Technology for Articulation Therapy in Public Schools, conducted by James E. McLean, Ph.D., and Sandra Raymore. (Reports contained herein are referred to as LENT, McLEAN/RAYMORE, MEDIA, and BUDDE.)

1. MAJOR ACTIVITIES AND ACCOMPLISHMENTS

During this grant year, personnel in Curricular Materials for the Mentally Retarded portion of Project MORE have engaged in the following activities:

Hair Rolling Program. The program was completed and offered for dissemination through Psychologists and Educators, Inc., and through the University of Kansas Division of Continuing Education and the Kansas Regional Instructional Materials Center. For a fuller description of this important milestone, see Media, Dissemination, and Lent, Dissemination.

Showering Program. During the first three quarters of the grant year, field testing of the Showering Program was conducted. In the final quarter pretest and posttest videotapes of the program were converted to data. This data on 15 subjects and the session-by-session analysis on five of these subjects were analyzed in order to make final revisions in the program. However, the data indicated that the number and extent of revisions required recycling the program back to the field testing stage on the implementation lattice to determine the adequacy of the revisions (see Lent, Problems).

Ironing Program. Field testing was continued on this program during the first three quarters of the grant year. In the final quarter pretest and posttest videotapes of the Ironing Program were converted to data. This data on seven subjects were analyzed in order to make final revisions in the program. This has proven an extensive undertaking because there are 532 separate behaviors in the program. (See Lent, Problems.)

Face Shaving Program. This program was begun during the first quarter, and field testing was conducted with four students at Western Carolina Center, Morganton, North Carolina, and with nine students at Parsons State Hospital and Training Center, Parsons, Kansas. At the current time seven additional students are undergoing training at Parsons, and it is anticipated that field testing will be completed in one month.

Of the 13 students who have completed training, session-by-session analysis data were obtained on seven students. Data reflecting pretest and posttest comparisons were obtained on 13 students. Instructional personnel responsible for teaching these 13 students varied in chronological age, CA, ethnic background, teaching experience, and education. Generally, these teachers were unaccustomed to instruction reflecting systematic intervention and programed materials. All 13 students conformed with sample specifications of adolescent or adult CA with IQ's between 25 and 55. All students were residents of public institutions for the retarded.

Feminine Shaving Program. Also begun during the first quarter, the first-draft form of this program was entered into the field testing stage. During the final quarter the data on the pretest and posttests of 10 subjects were analyzed, as was session-by-session data on six of these subjects. A second field-testing phase is currently being conducted to identify any additional need for revisions prior to final mediation. This field testing is being conducted on seven additional subjects which will boost the total to 17. The pretest and posttest and session-by-session data (see Lent, Data Collection) to date indicate that the program can be simplified (see Lent, Significant Findings and Events).

Toothbrushing Program. This program, developed to teach toothbrushing behaviors, was tested, revised, and placed in the nonstaff testing phase during the first three quarters of the grant year. In the final quarter the rough draft of the program was mediated into a prototype program. The data sheet, serving as both an observer checklist for pretesting and posttesting and as a session analysis form, was developed, mediated, and included in the prototype. In addition, a form has been included in the prototype on a trial basis to provide a teacher the opportunity to chart each student's progress in the program. Testing of the prototype program has commenced, using a multiple baseline experimental design. This testing is approximately two-thirds completed. If only minor revisions result from this

experimental analysis of the program, field testing of the prototype will be scheduled. THIS PROGRAM IS APPENDED TO THE OFFICIAL COPIES OF THIS PROGRESS REPORT.

Complexion Care and Cosmetics Program. Begun during the first quarter, the rough draft of this program was completed and in-house testing was initiated. During this report period the complexion care portion of the program entered the nonstaff testing phase with four subjects, Adaptive Behavior Level III, 14 to 21 years old, until the person hired on a part-time basis from the community terminated her employment to enroll in college. The program has not progressed beyond this stage in the implementation procedure due to the demand on research assistants' time to concentrate on revisions being made to finalize the Showering and Ironing Programs and to continue development of remaining programs.

Eating Etiquette Program. This program, which was in the very early stages of development during the first quarter, underwent in-house testing and was prepared for nonstaff testing. In-house testing of the program has been completed during the final quarter. A prototype program has been mediated. Revision of the introduction has been completed, and the introduction has been mediated and added to the prototype program. Observer checklists and session-by-session analysis forms have been mediated. The scheduling of students and the acquisition of nonstaff testers was carried out and nonstaff testing began January 15, 1973.

Telephone Usage Program. During the first three quarters of the grant year, data for this program, which was designed to be applicable to the lower-level mentally retarded, was collected to determine which institutional residents make use of the telephone. The program is now undergoing revision. In-house testing indicated that the program is effective when taught by staff members who are familiar with its construction. Revisions currently underway include an introduction with more detail regarding the means by which the program's subcomponents can be taught more effectively.

Appropriate Mode of Clothing Program. Also begun during the first quarter, this program proceeded by specifying a minimal wardrobe for adolescent males and females. The program is currently in rough-draft form. The mediation of the figures and clothes has been completed. In-house testing of the program is awaiting the completion of graphic renditions of different occasions and settings for which differential dress is required. Students in the program will be taught to identify the mode of clothing most appropriate for various occasions. This program and the Complexion Care Program remain float programs which are scheduled for further development when other programs are in production phases, permitting program personnel additional time to work on other programs.

2. PROBLEMS

The overriding problem occurring during the first three quarters of the grant year concerned field testing of the programs. Project personnel were unable to monitor adequately the use of programs by individuals in the field, and much of the data acquisition was confounded by delays, poor monitoring of training, and lack of motivation among training personnel.

To overcome this problem, a system was set up to designate a professional at the field-test site to monitor the programs. These professionals were to undergo an intensive training program at the Parsons site. They were brought to Parsons and trained intensively in Project MORE's observation and data-gathering procedures.

Conflicting responsibilities at many of the field-test sites, however, prevented these professionals from administering the programs often enough and systematically enough. In many cases the professionals did not have sufficient control over their own complex environments. However, the few sites returning usable data have been retained as field-test sites.

Most of the field testing is now being conducted at Parsons State Hospital and nearby sites. This plan has called for a major redefinition of roles and responsibilities for a large number of Hospital staff members.

During the final quarter of the grant year, several lesser problems have come to the attention of the Project staff. Data on the Showering Program has revealed that the behaviors directly cued by the recorded "Shower Song" were demonstrated by the students. Those behaviors which were not directly cued, however, were only occasionally exhibited. The song cued washing the ears, but not behind the ears. It cued washing the neck, but not both sides, back, and front. While all of the major parts of the body were identified in the song, the actual washing of some of these parts of the body was left to be cued by the teacher. Because the students

did only what was directly cued by the song, the teachers evidently were not teaching the program effectively.

The decision was made to rewrite the song, wording it to clearly cue everything required for successful bathing and providing sufficient time in it for the student to carry out these activities. Revisions in the song also include a cue to get wet, an additional opportunity to soap the washcloth, and verses to cue rinsing and drying.

The data on the Ironing Program indicates that too many different behaviors are required of the students. As new behaviors are learned, behaviors taught earlier in the program are forgotten. The students end the program with a random assortment of ironing behaviors, but not enough of a constellation of behaviors for them to be considered adequate ironers. Since the art of ironing is less important today than in the days prior to no-iron fabrics, the Project is reconsidering the worth of the tedious programing required to establish the ironing behaviors adequately. Rather than recommending that the program be scrapped, an attempt is being made to determine whether the essential critical components of ironing may be pulled out of the program and adequately programed. The remaining components would then have to be acquired by students through practice over a longer period of time.

Problems with the Face Shaving Program appear to be fairly minor but indicate nevertheless the necessity to revise portions of the program. It has become increasingly apparent that students benefit more from initial instructional sessions than they do from later ones. The program format does not take into account these differences in instruction and therefore allows for a decrease in performance during the teaching of latter units. A new format is being developed which will allow for a pretest followed by recommendations to the teacher to instruct in earlier sessions as many behaviors as are feasible during each beginning session.

The shaving of sideburns seems to be a difficult behavior for students. This problem can be circumvented if increased direction is provided to students as they are being taught to apply shave cream to sideburns and to remove shave cream from sideburns. Revisions are currently underway to overcome this problem.

3. SIGNIFICANT FINDINGS AND EVENTS

During the first part of the grant year, data from field testing of the Hair Rolling Program indicated several minor revisions were needed in teachers' instructions in order to communicate more effectively what the teacher was to do. This data was incorporated into a paper titled, "Field Trials of a Procedure for Teaching Hair Rolling to Moderately Retarded Females." Data also indicated that Unit Five (insertion of picks into rollers) was an easier task than anticipated, and this unit was deleted and certain of its behaviors were incorporated as two additional steps in Unit Four of the program.

Preliminary data from the Ironing Program indicated that the program was too complex for most teachers. Accordingly, revisions are being made. (See Lent, Problems.)

The technology for design and development of programs has proven to be functional during the past year. It has been found to be an efficient technology generalizable to other similar projects. However, refinements are being made which will be reported next quarter.

Final-quarter findings on the Feminine Shaving Program have indicated that the program effectively established nearly all of the critical behaviors. This conclusion was drawn from pretest and posttest differences which averaged 71 percent improvement.

Revisions of the Feminine Shaving Program will include more opportunities to teach the more difficult behaviors, such as inserting the razor blade into the razor and testing shaved areas for smoothness. Also, some steps were overprogramed on the basis of the initial sample. Such behaviors as adjusting the hot and cold water taps to produce warm water were more easily learned by the majority of students than the program originally anticipated.

The revised Feminine Shaving Program will abandon the unit approach and will offer the teacher the opportunity to teach all of the unlearned behaviors

at each session, provided time and the continued attention of the student make this procedure feasible. Data on two subjects who were taught the program in this manner are presented in Lent, Data Collection (Figures (6)6 and (6)7). Preliminary evidence indicates that the program can be more effective using this type of format.

Pretest and posttest differences in the face shaving performance of 13 students are presented in Lent, Data Collection (Figure (6)8). This data indicates that all 13 students benefited from instruction. From a total of 37 behaviors being taught in the program, the students performance ranged from an increase of 21 behaviors to an increase of four. The mean gain in performance was 15.46.

Of the 37 behaviors being assessed, five are particularly important. These include: 1) adequately shaves right cheek; 2) adequately shaves left cheek; 3) adequately shaves above lip; 4) adequately shaves chin; and 5) shaves all of neck. Pretest and posttest differences in performance on these five behaviors are presented in Illustration 1.

Illustration 1

Pretest and Posttest Differences in Performance on Five Terminal Shaving Objectives

Pretest	Posttest	
	13	4
	39	9

This illustration summarizes the pretest and posttest differences in performance of 13 students on five critical behaviors. Out of a total of 65 behaviors, 39 were absent during the pretest but present during the posttest. The four behaviors present during the pretest but absent during the posttest were performed by one student who apparently became increasingly apathetic and inattentive as training progressed.

The session-by-session analysis data on all subjects presented in Lent, Data Collection (Figures (6)9 through (6)15), indicates generally that training was more effective during earlier training sessions.

4. DISSEMINATION ACTIVITIES

Significant events leading to the dissemination of Project MORE programs have taken place during this grant year. To begin with, the acronym Project MORE (Mediated Operational Research for Education) was adopted after John Dostal of Garden City, New York, consultant in educational marketing, recommended the selection of an acronym as a first step in a marketing plan. In addition, the University of Kansas, as grantee, has made arrangements with the Division of Continuing Education at the University of Kansas and the Kansas Regional Instructional Materials Center to distribute the Hair Rolling Program. A commercial distributing company, Psychologists and Educators, Inc., has listed the Hair Rolling Program, The Ironing Program, The Face Shaving Program, The Feminine Shaving Program, and The Showering/Bathing Program in their 1973 catalog and will sell the programs on consignment.

Briefly listed below are the steps taken during this grant year by Project MORE and its grantee organization, the University of Kansas, to obtain commercial outlets for its products:

1. Numerous letters were sent in an attempt to interest a full-process publisher in Project MORE materials.
2. Procedures were initiated to copyright The Hair Rolling Program, The Ironing Program, and The Showering Program, using the regulations set forth.
3. The grantee (the University of Kansas) requested and was granted permission from the Office of Education to claim developmental copyright for a period of two years on all of the Project MORE materials.
4. Efforts to provide as much public exposure of Project MORE programs as possible have resulted in the creation of demands for Project programs, enhancing their marketability. This exposure has included a Project brochure and a display exhibited at several conferences.
5. A distribution agreement between the grantee and Psychologists and Educators, Inc., of Jacksonville, Illinois, has been drafted and approved.

In addition, Edmark, Inc., of Seattle has expressed an interest in Project products.

6. An agreement has been drawn which authorizes the Extramural Independent Study Center of the University of Kansas to act as agent for the grantee. (See Media, Dissemination.)

Experimental versions of the Hair Rolling Program have been placed on the market, with experimental versions of other programs to follow as validation is completed. The marketing of the experimental versions of the programs permits the Project to gather market analysis data in addition to collecting more comprehensive data on the effectiveness of the programs through widespread use.

Through the two-year development copyright authorization agreement with USOE, the grantee (through Project MORE) may market such experimental versions of its products until September 15, 1974. At any time prior to that date, it is the option of the grantee, if it should reach a satisfactory agreement with a publisher, to submit to the USOE Copyright Administrator a copy of that agreement for approval. If such approval is granted, the grantee will receive an authorization to market products commercially as final materials.

Final quarter dissemination activities for the Project are outlined in Media, Dissemination.

5. CAPITAL EQUIPMENT ACQUISITIONS

1 Roberts Model 95 Solid State Stereo Casette Tape Deck	$99.00
1 Monroe Model 20 Electronic Display Calculator	$147.00
1 Sears Humidifier	$119.95
1 Sears Humidifier	$82.95

6. DATA COLLECTION

During the first three quarters of the grant year, pretest, posttest, and session analysis data on the Ironing, Showering, Face Shaving, and Feminine Shaving Programs was collected. Pretest videotapes were transformed by trained observers into data, and reliability of observation was computed. The conversion to data was completed in a prearranged system in order to minimize any observer bias which might occur if pretests and posttests are observed in blocks.

A Program Implementation Lattice was set up prescribing eleven points at which data is collected:

1. Analyze videotape for content and sequence
2. Develop overall loading chart
3. Alternative format test
4. In-house test on rough draft
5. Nonstaff test of program
6. Pretest program
7. Follow-up visits
8. Posttest program
9. Observation of videotapes
10. Analyze observer checklist data
11. Graph session analysis data.

Much of the data collection activity during the final quarter has centered on the Feminine Shaving Program and the Face Shaving Program.

Pretest to posttest change in the Feminine Shaving Program is presented in Figure (6)1. In addition, session-by-session acquisition of the behaviors in each unit is presented in Figures (6)2 through (6)5. The acquisition of the behaviors of the Feminine Shaving Program, when all unlearned behaviors are taught in each session, is presented in Figures (6)6 and (6)7.

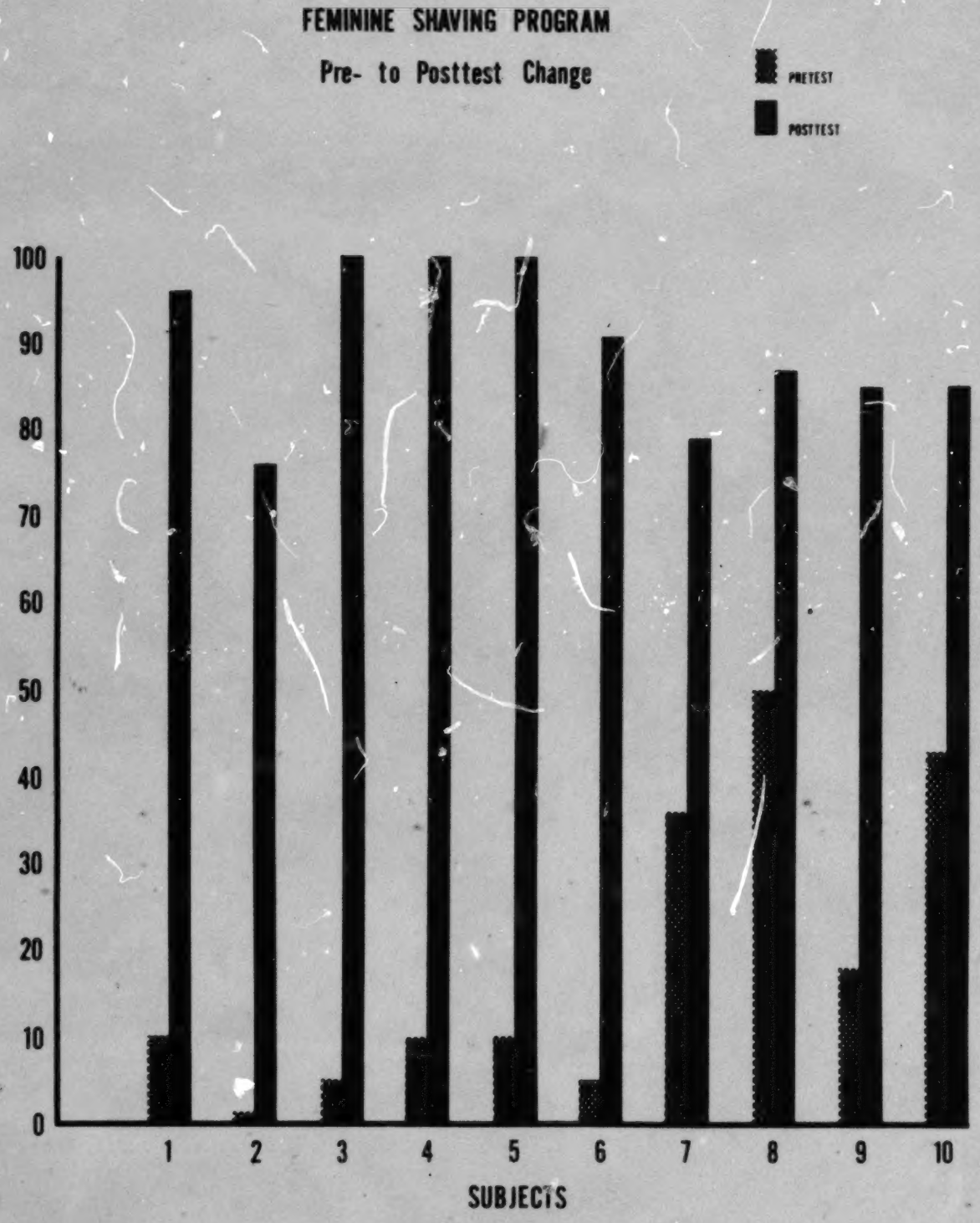

FEMININE SHAVING PROGRAM
Pre- to Posttest Change
PRETEST
POSTTEST
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
SUBJECTS

Figure (6)1

FEMININE SHAVING PROGRAM
Session-by-Session Data

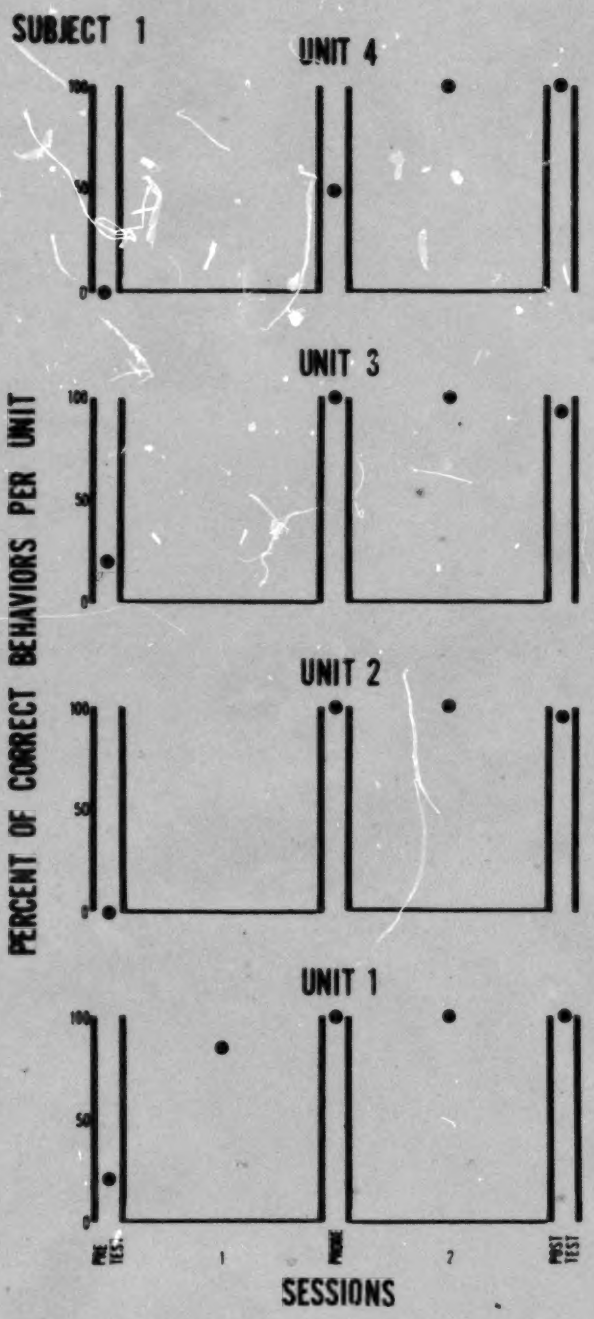


Figure (6)2

FEMININE SHAVING PROGRAM
Session-by-Session Data

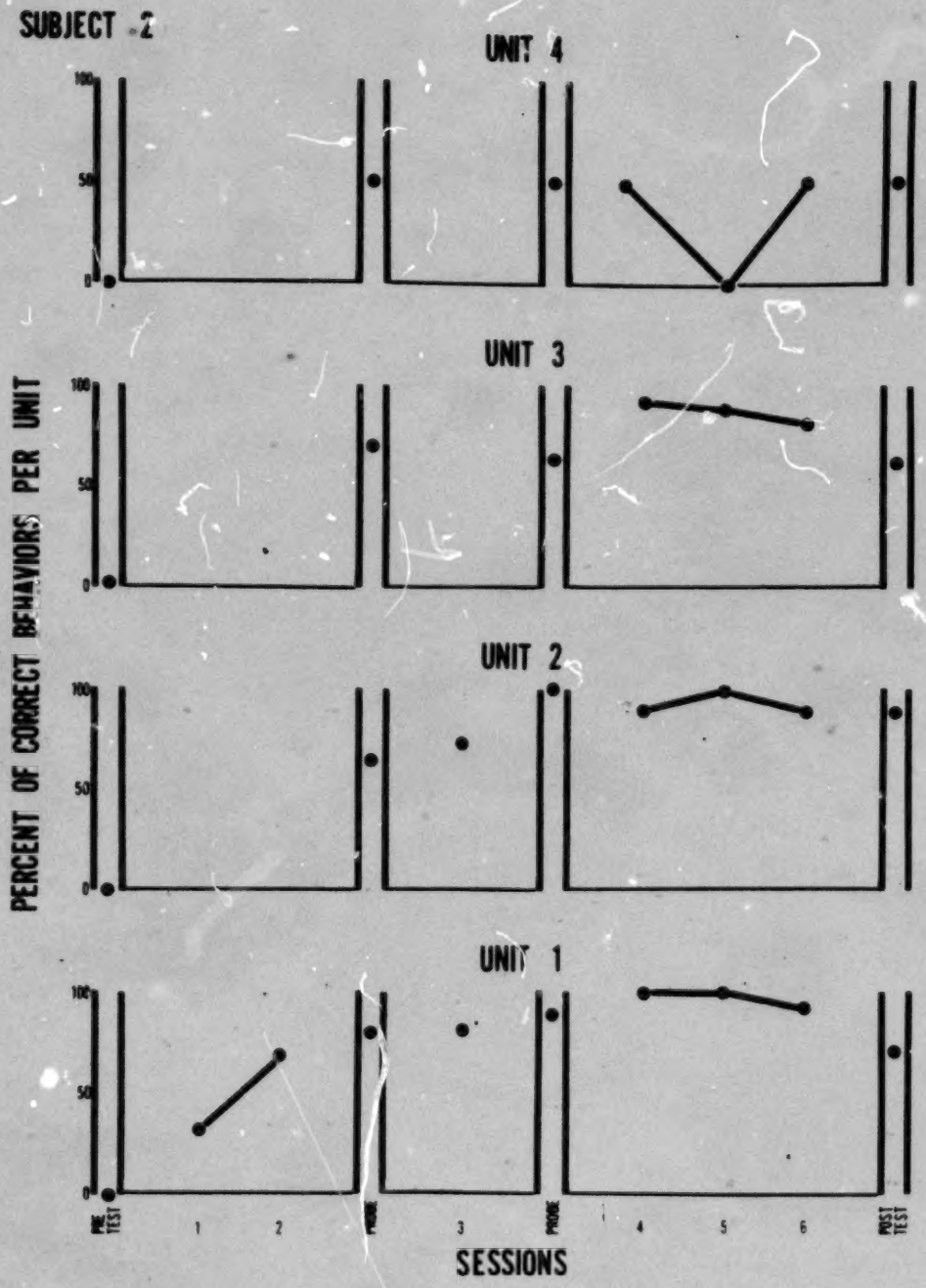


Figure (6)3

FEMININE SHAVING PROGRAM
Session-by-Session Data

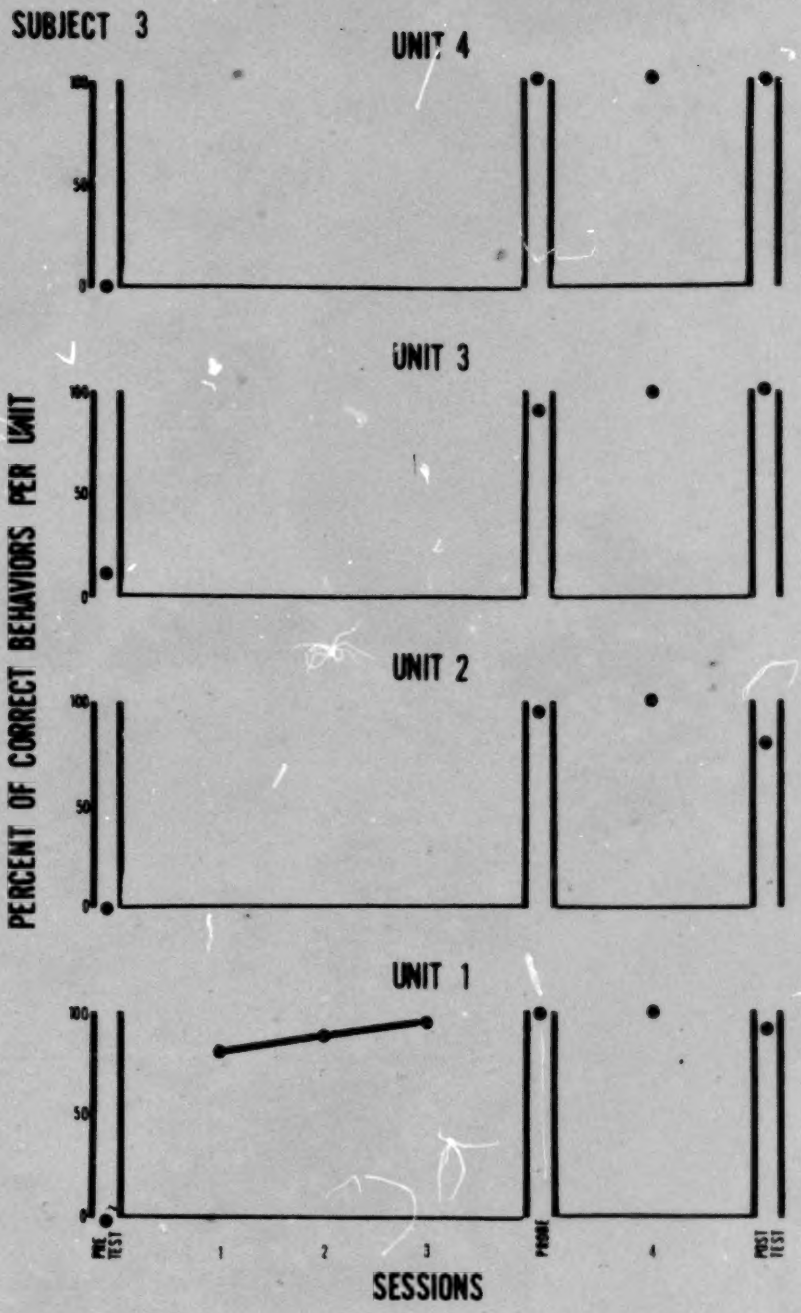


Figure (6)4

FEMININE SHAVING PROGRAM
Session-by-Session Data

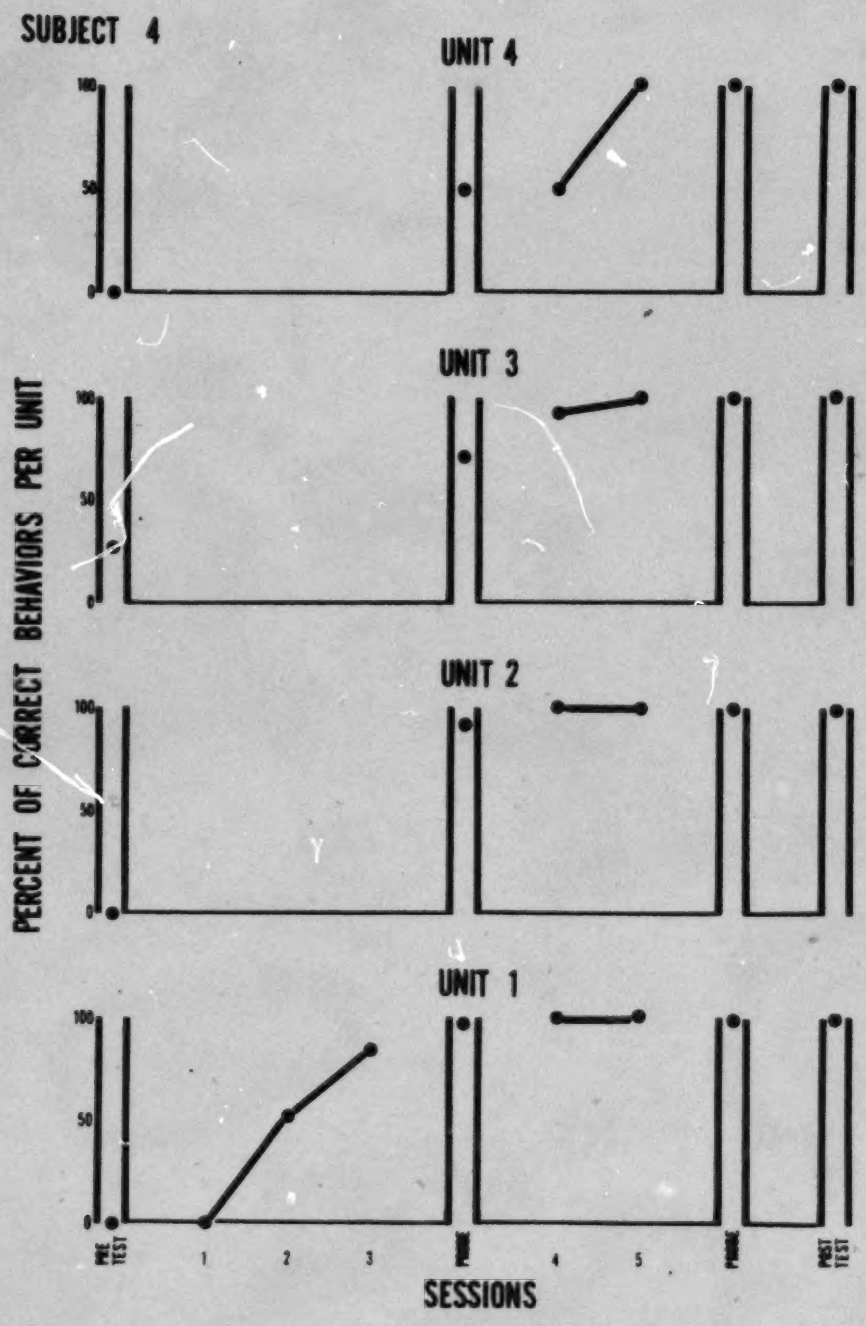


Figure (6)5

FEMININE SHAVING PROGRAM
Session-by-Session Data

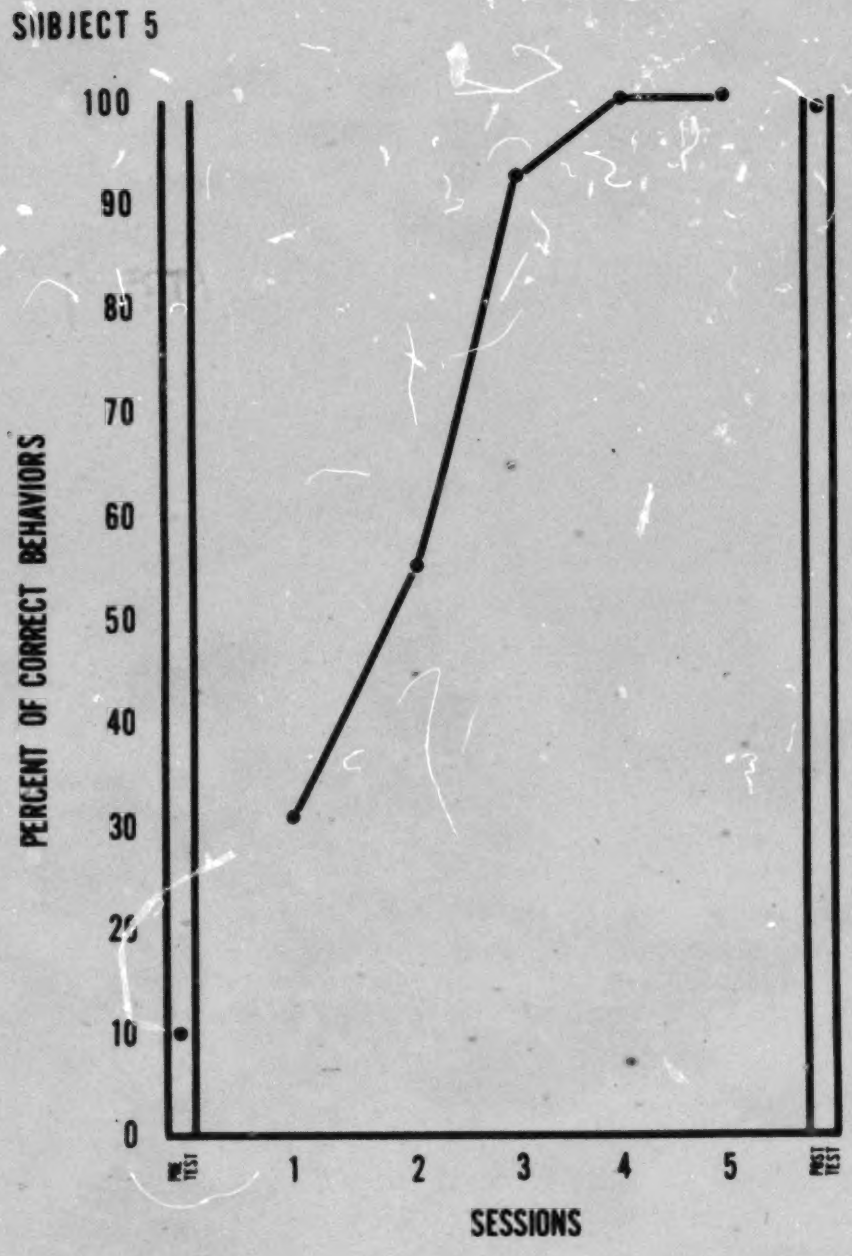


Figure (6)6

FEMININE SHAVING PROGRAM
Session-by-Session Data

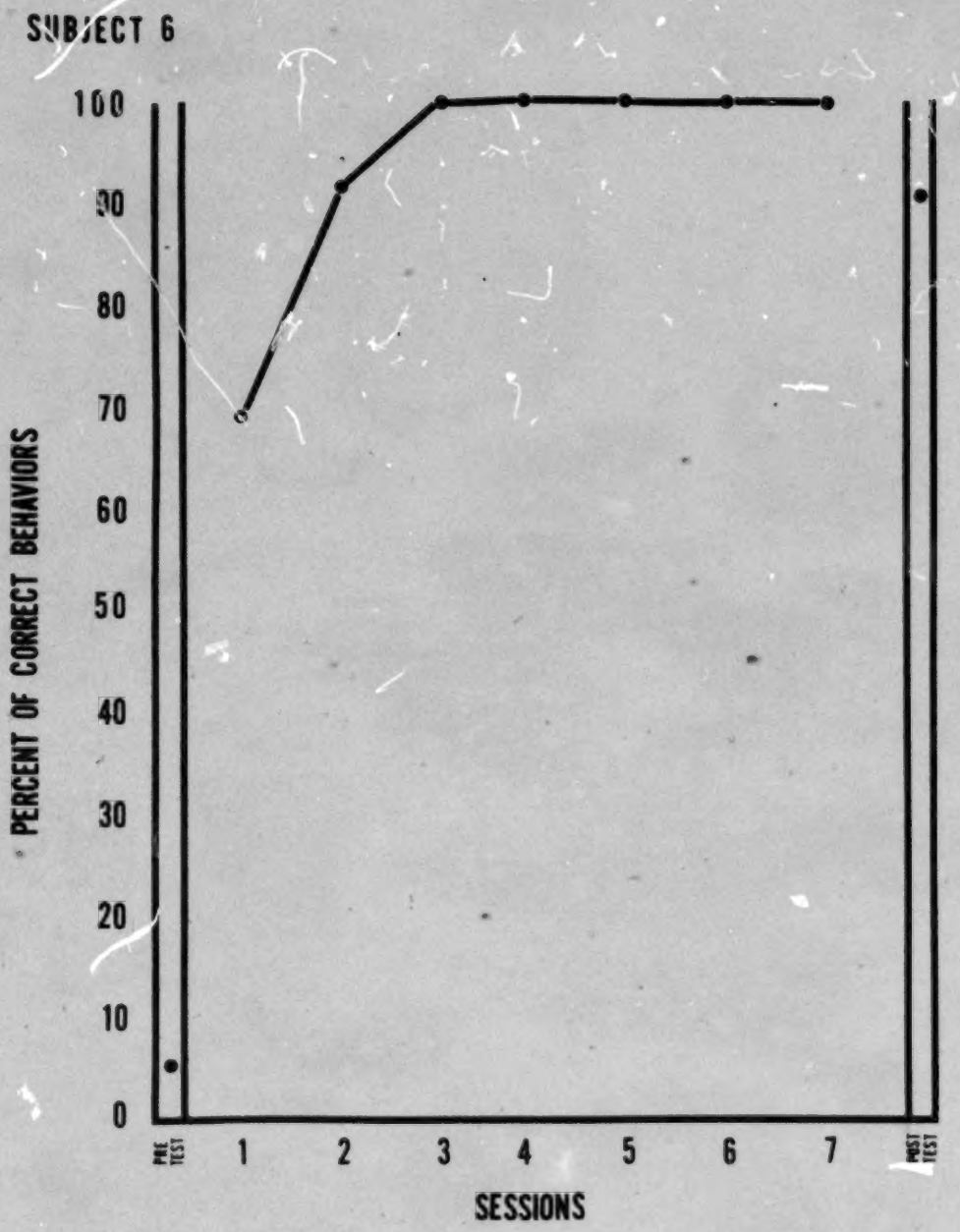


Figure (6)7

Reliability of the pretest and posttest observation, computed in the same manner as for the Face Shaving Program, are presented in Illustration 2.

Illustration 2
Observer Reliabilities
Feminine Shaving Program

Subject		Observers A and B
1	pretest	100%
	posttest	97
2	pretest	99
	posttest	95
3	pretest	91
	posttest	83
4	pretest	94
	posttest	100
5	pretest	93
	posttest	100
6	pretest	95
	posttest	98
7	pretest	89
	posttest	92
8	pretest	100
	posttest	95
9	pretest	91
	posttest	94
10	pretest	100
	posttest	91

Pretest and posttest differences in the face shaving performance of 13 students are presented in Figure (6)8. Reliability was assessed by first having two research assistants observe a demonstration tape of face shaving and independently record each behavior as it occurred. When disagreement occurred, behavioral definitions were revised and the process repeated until both raters were in 100 percent agreement with each other. Both raters then assessed the pretest and posttest face shaving performance of 13 students. The reliability figures reported in Illustration 3 range from 89 percent to 100 percent agreement which is

considered to be well within acceptable limits.

Illustration 3
Observer Reliabilities*
Face Shaving Program

Subject		Observers A and B
1	pretest	94%
	posttest	94
2	pretest	100
	posttest	97
3	pretest	95
	posttest	100
4	pretest	95
	posttest	93
5	pretest	95
	posttest	89
6	pretest	100
	posttest	95
7	pretest	100
	posttest	100
8	pretest	91
	posttest	94
9	pretest	97
	posttest	91
10	pretest	97
	posttest	91
11	pretest	97
	posttest	89
12	pretest	91
	posttest	91
13	pretest	94
	posttest	91

**Reliability was computed by first comparing the checklists of both observers and determining the total number of agreements and disagreements. The combined total of agreements and disagreements was then divided into the number of agreements and multiplied by 100 to arrive at the percentage of agreement.*

Additional validity was obtained through a session-by-session analysis. This method of data collection allowed for the assessment of behaviors demonstrated at each instructional session. Also the assessment of all behaviors requisite to face shaving were determined from probes which occurred prior to the introduction of Units 2, 3, and 4. This data is presented in Figures (6)9 through (6)15.

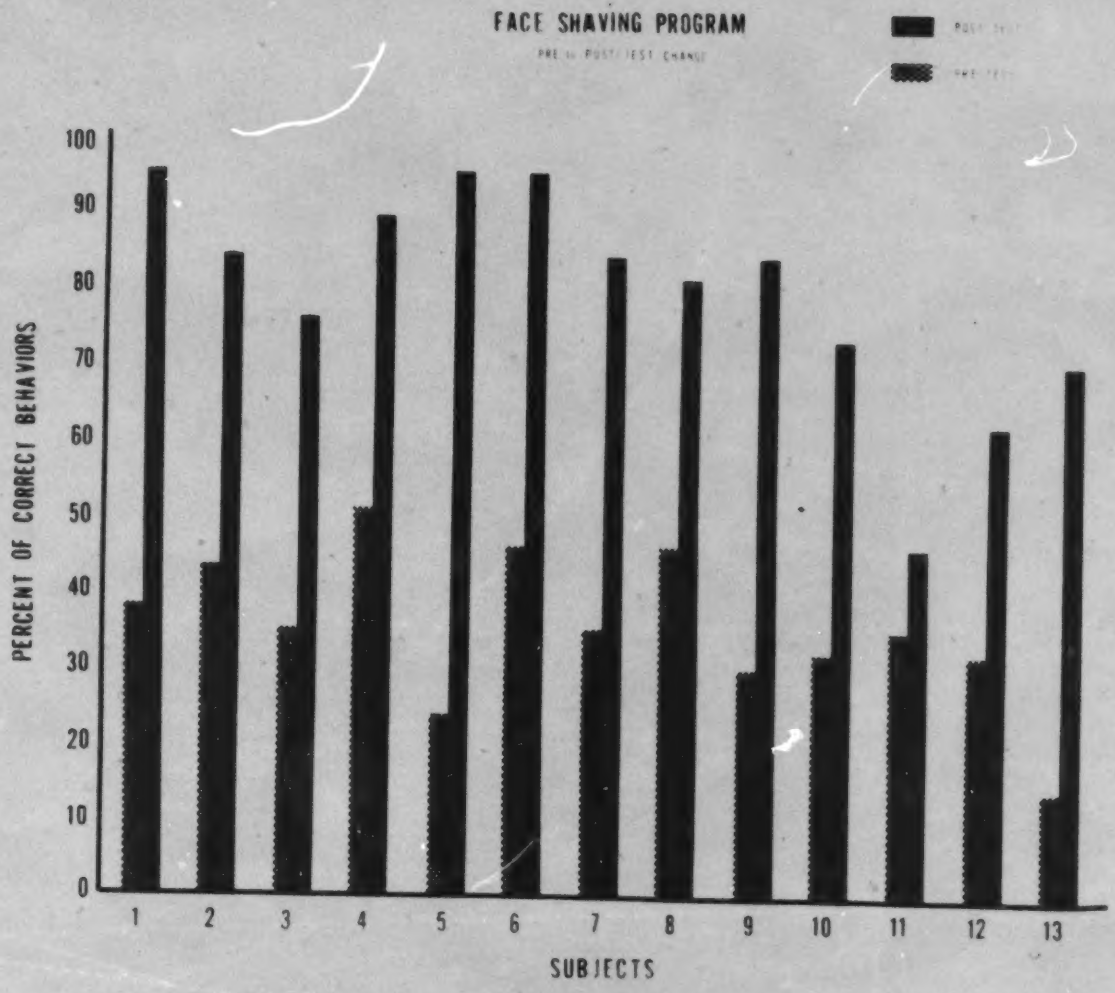

FACE SHAVING PROGRAM
PERCENT OF CORRECT BEHAVIORS
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
13
SUBJECTS

Figure (6)8

FACE SHAVING PROGRAM
Session-by-Session Data
SUBJECT 1

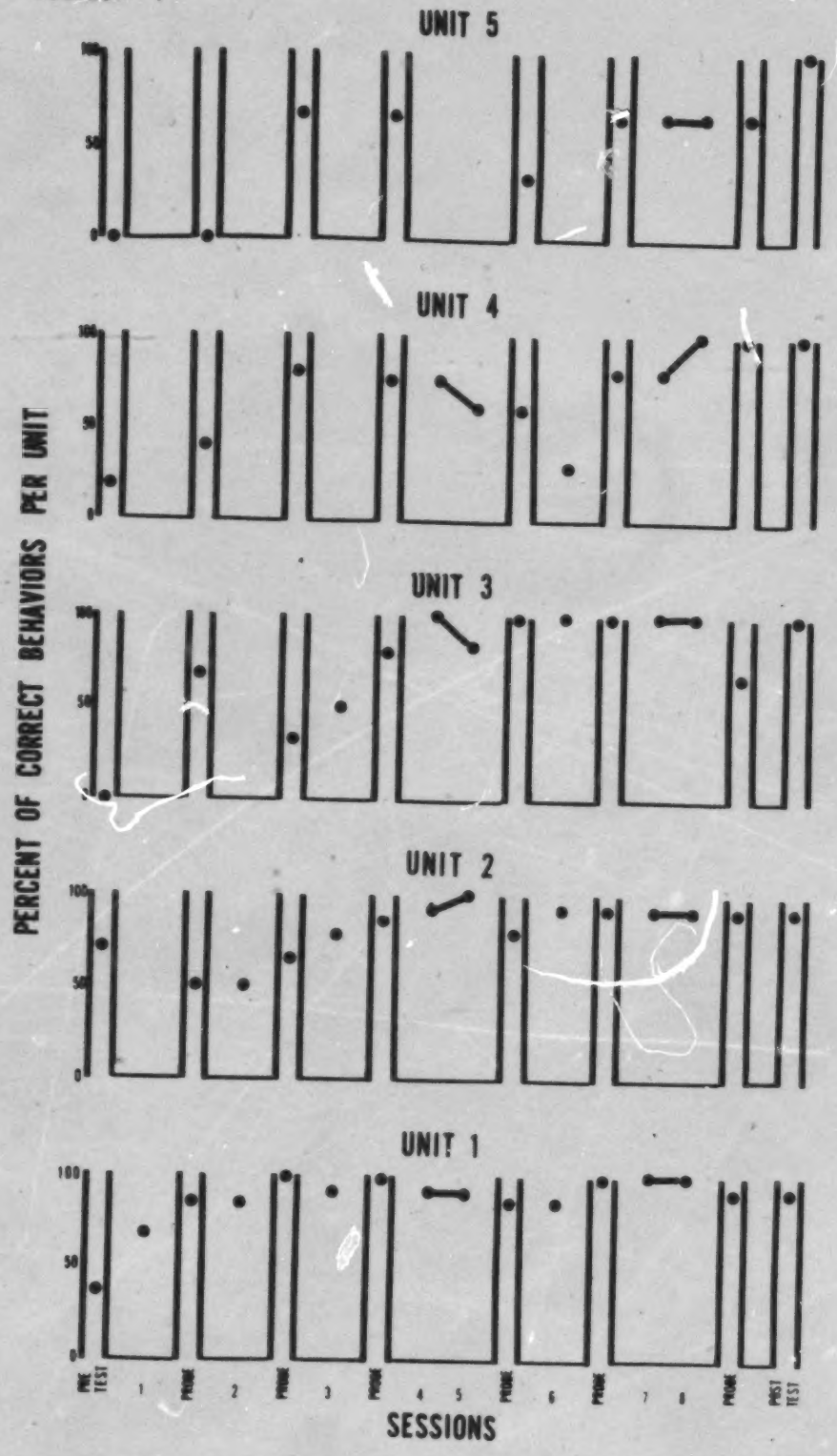


Figure (6)9

FACE SHAVING PROGRAM
Session-by-Session Data

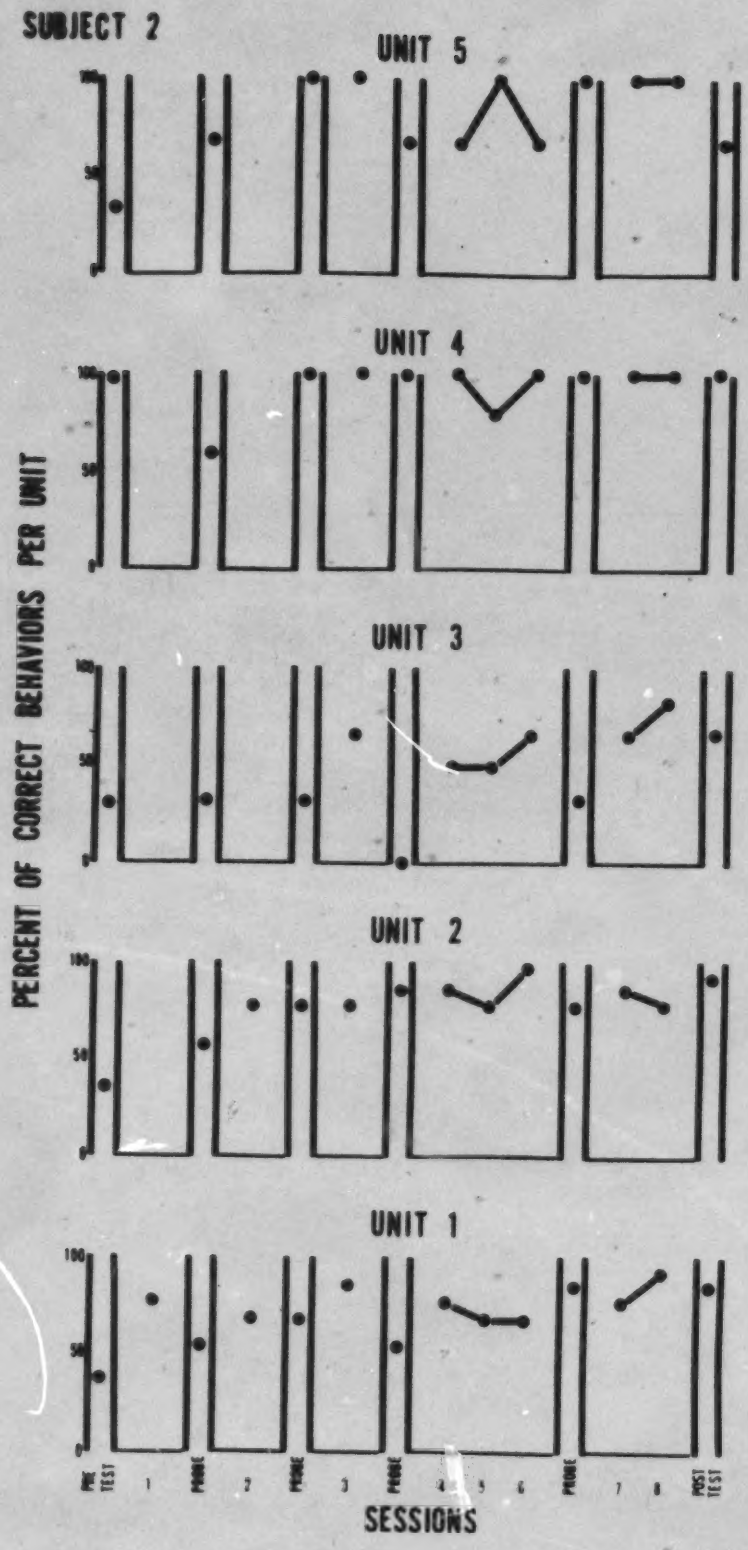


Figure (6)10

FACE SHAVING PROGRAM
Session-by-Session Data
SUBJECT 3

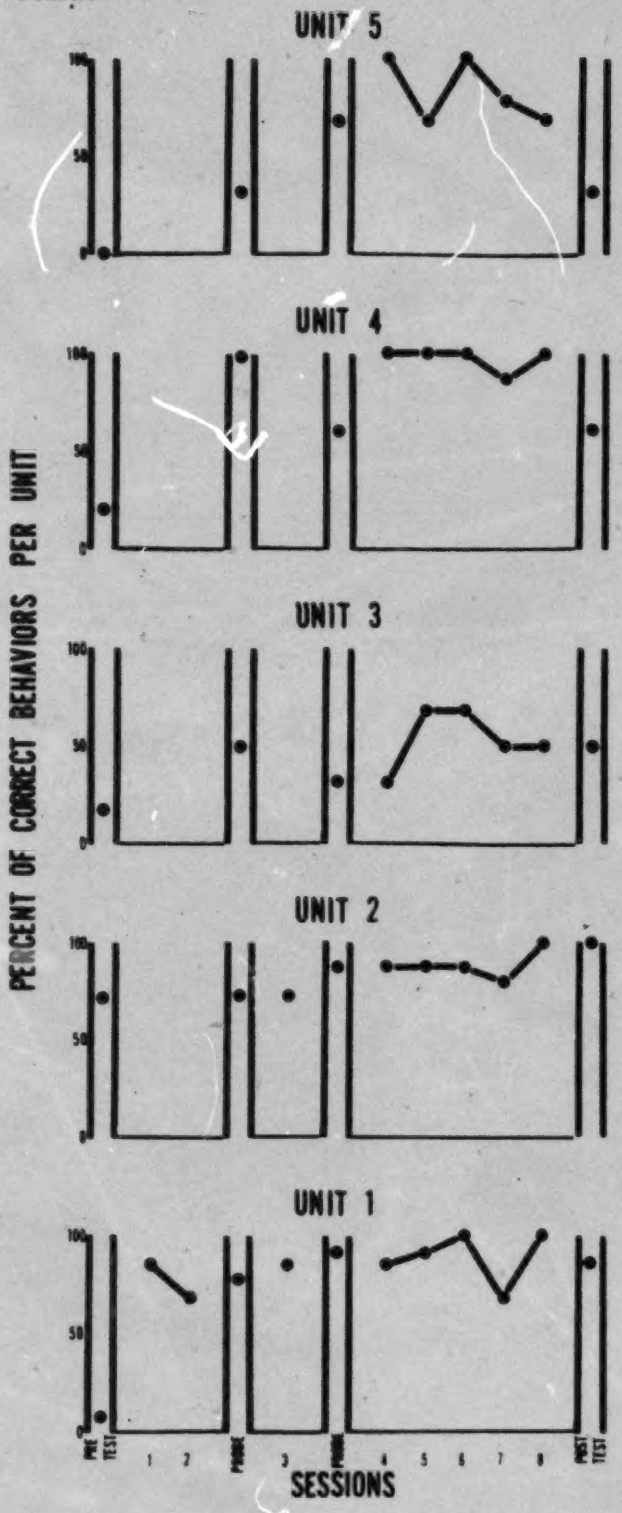


Figure (6)11

FACE SHAVING PROGRAM
Session-by-Session Data

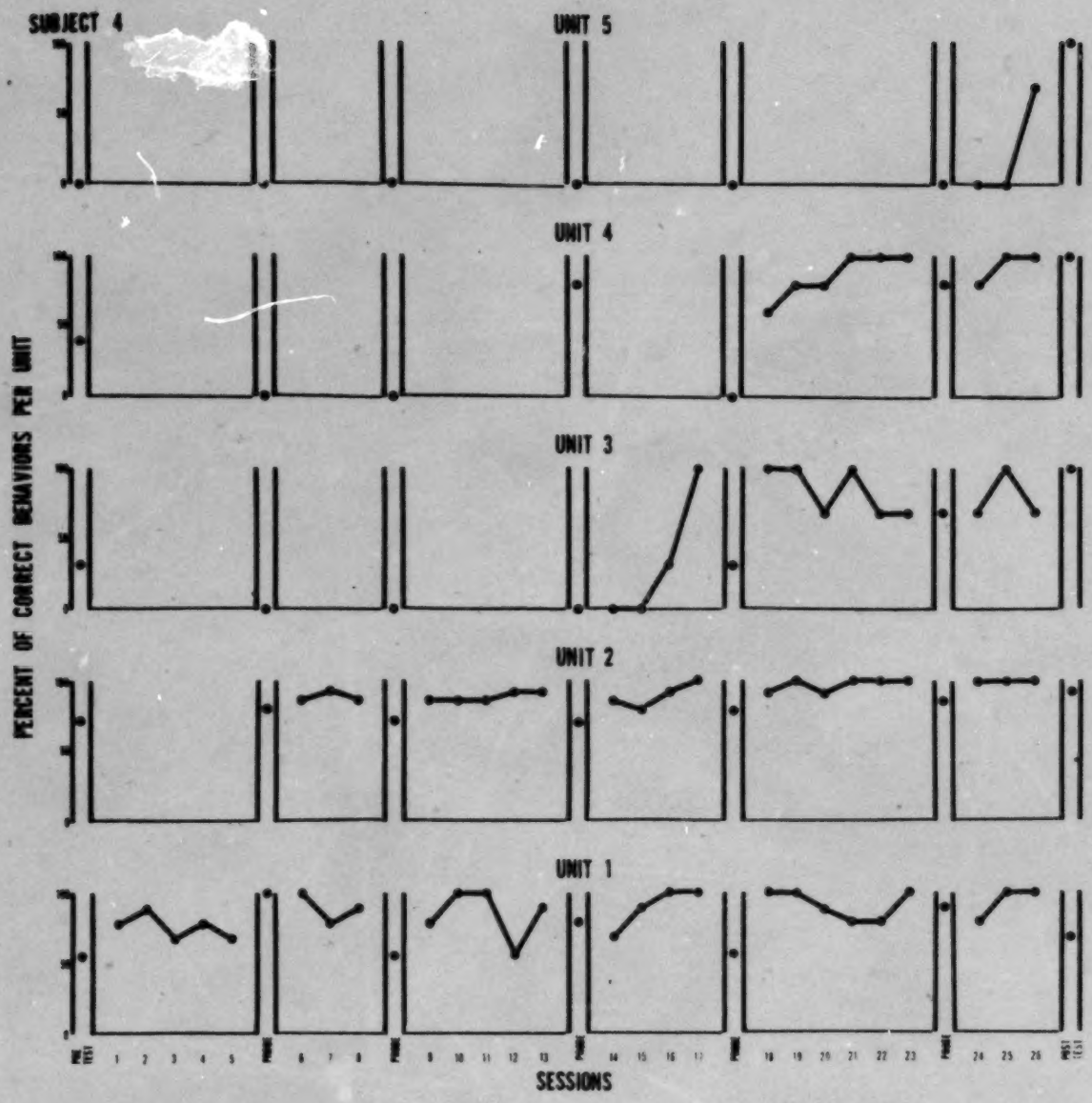


Figure (6)12

FACE SHAVING PROGRAM
Session-by-Session Data

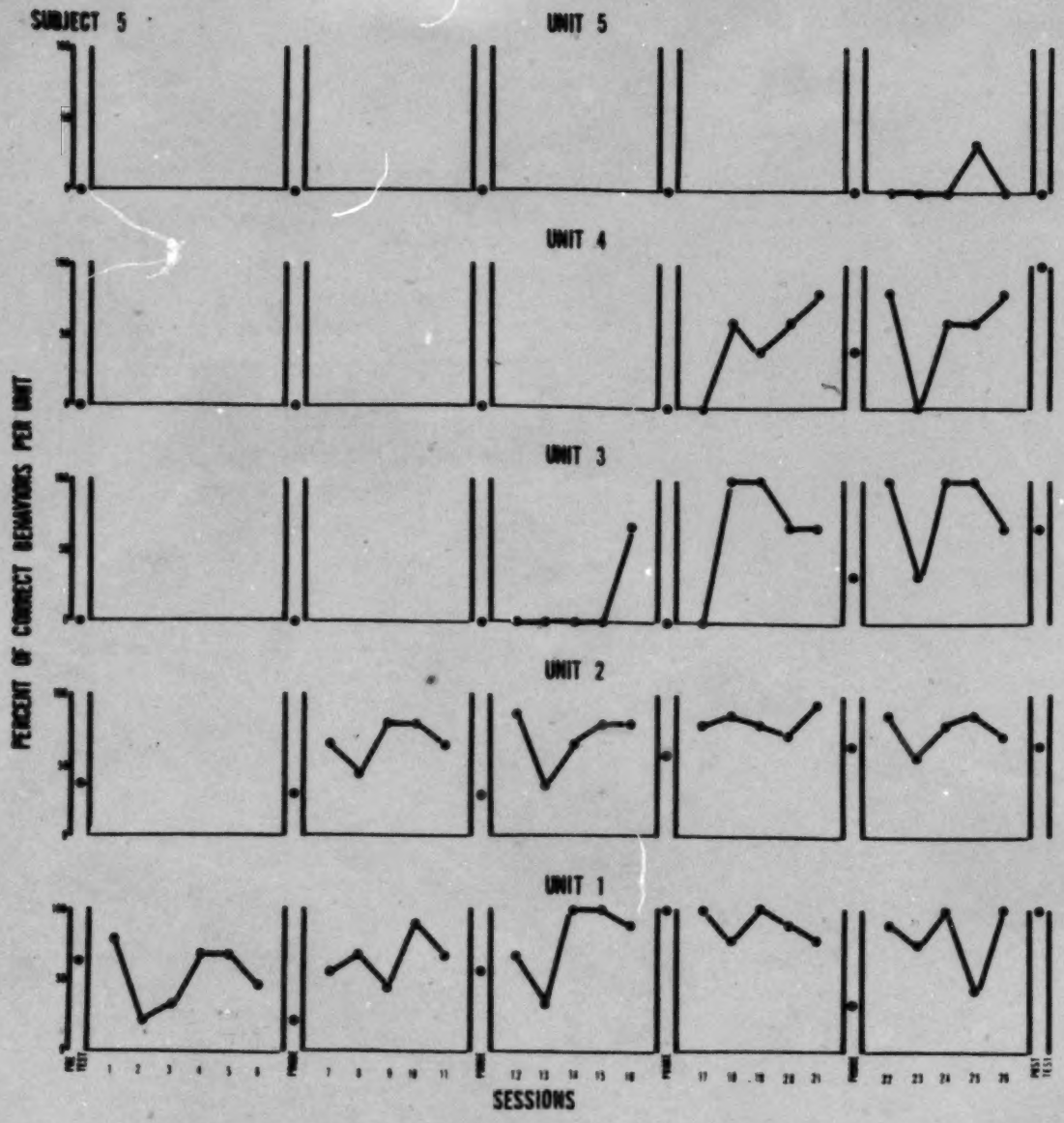


Figure (6)13

FACE SHAVING PROGRAM
Session-by-Session Data

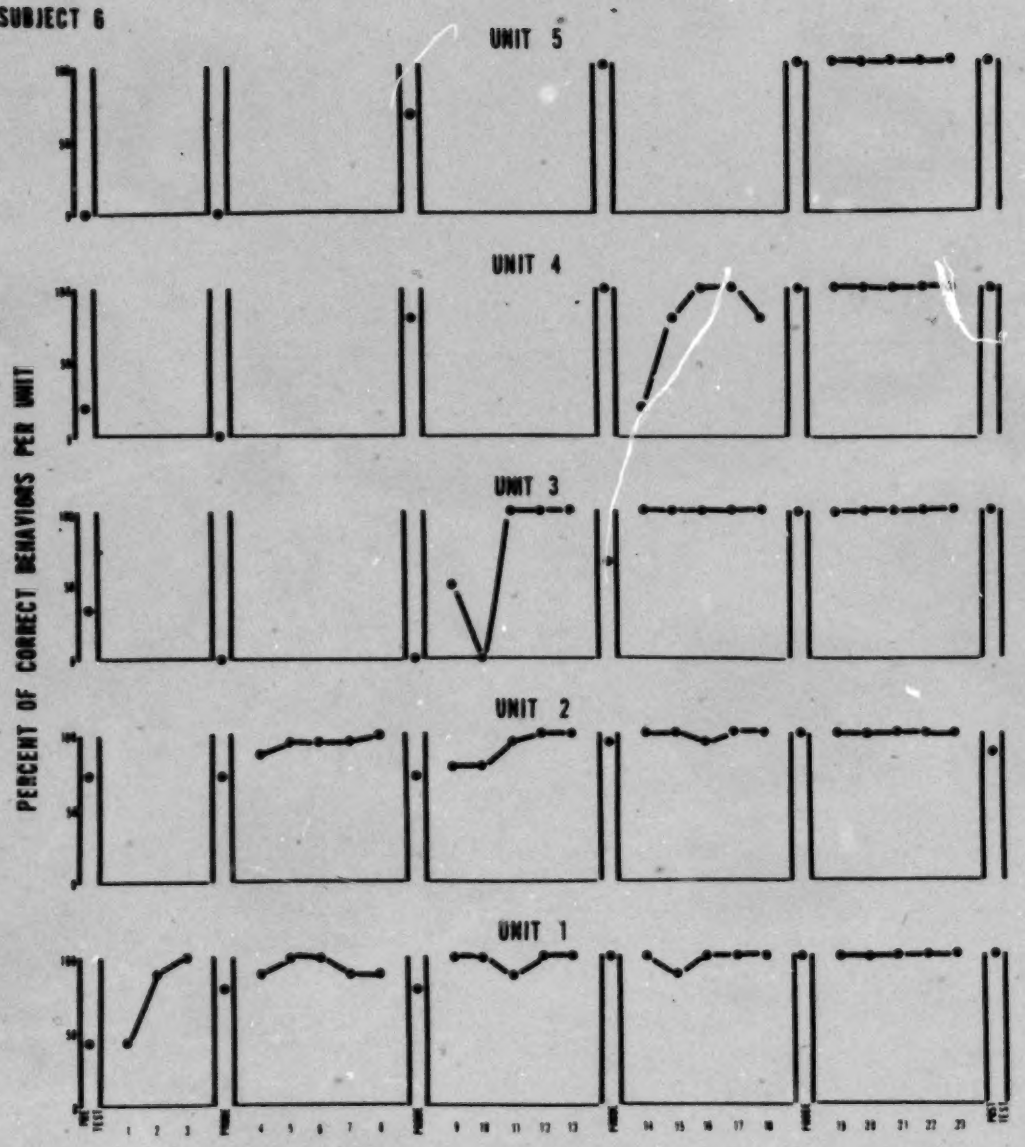


Figure (6)14

FACE SHAVING PROGRAM
Session-by-Session Data

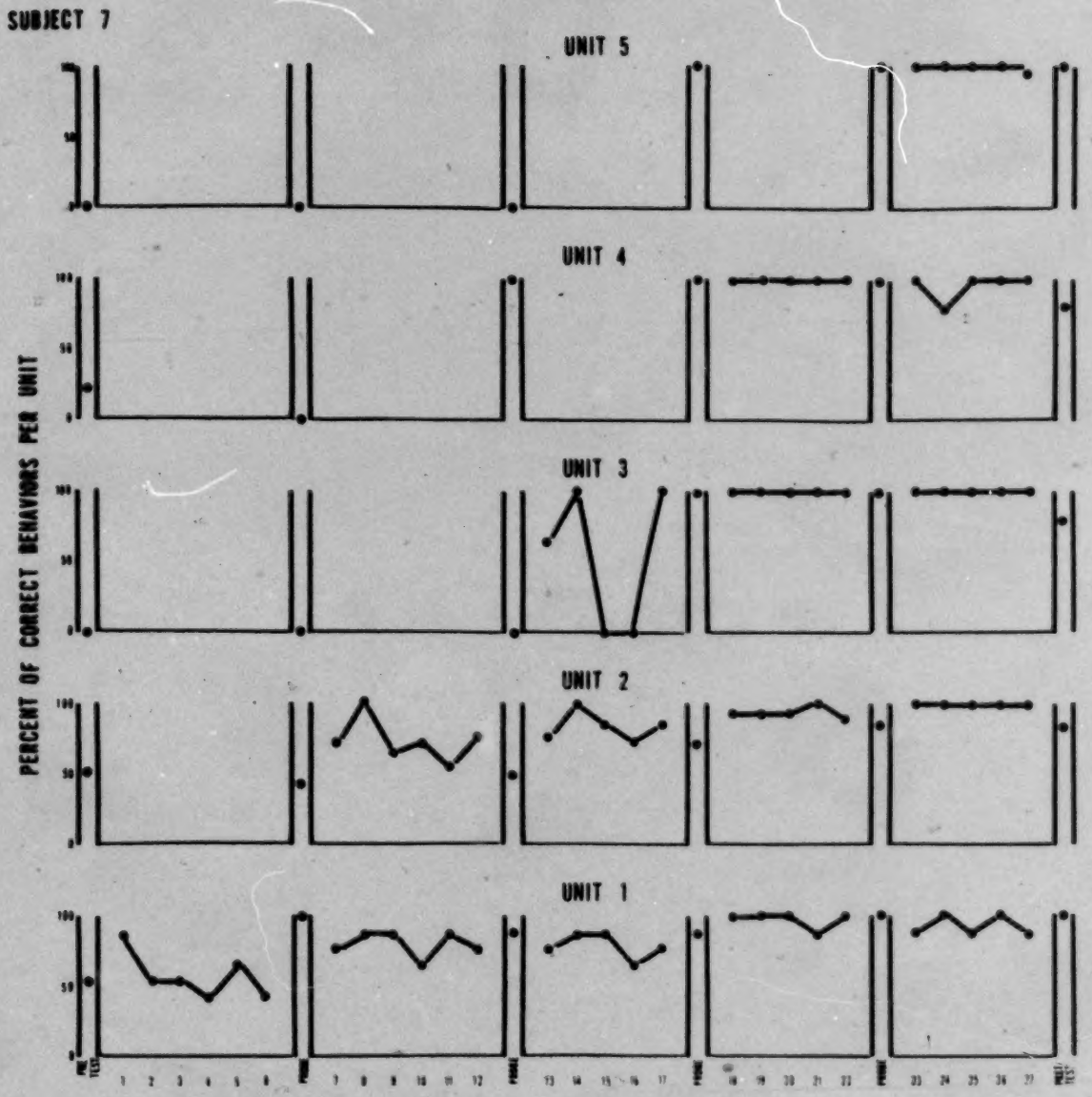


Figure (6)15

7. OTHER ACTIVITIES

Several presentations were made at conferences and workshops throughout the country and in two foreign countries during the first three quarters of the grant year.

- Results and exhibits of three different aspects of the Project were presented at the AAMD convention in Minneapolis.
- The Project Director and Research Associate presented the results of the Project at the Behavior Modification Workshop in Atlanta.
- The Project Director presented the results of Project MORE as part of a workshop in Amsterdam, the Netherlands.
- The Assistant Director made two Project related presentations at the Columbus Behavior Modification Workshops in Columbus, Ohio.
- Project MORE products were exhibited at the Regional AAMD Convention in Hot Springs, Arkansas.
- Project MORE products were exhibited at the 5th International Congress on Mental Retardation in Montreal, Canada.
- The Project Director discussed Project activities at the Nashville Conference, Nashville, Tennessee.
- The Assistant Director and the Research Associate discussed the utilization of Project MORE products at the Memphis School for the Mentally Retarded in Memphis, Tennessee.
- A post-doctoral trainee working with Project MORE discussed his work in conjunction with Project activities at the Psychology Colloquim Series, Kansas State University, Manhattan, Kansas.

During the final quarter the Project Director and Instructional Media Analyst exhibited Project MORE materials to the State Directors of Special Education at a meeting in Washington, D.C., on November 28, 29, and 30.

The Project Director and Instructional Media Analyst also consulted with

the National Center for Educational Methods and Materials on issues related to the capabilities and services of the National Media Center. The meeting was held on December 1 in Columbus, Ohio.

On December 6, 7, and 8 the Project Director consulted with the Regional Resource Center in Las Cruces, New Mexico, on the subject of utilizing educational technology in training the trainable retarded.

The following publications have stemmed from Project MORE activities during this grant year:

Ferneti, C. L., et al. Direction Following of Retarded Adolescents as a Function of Verbal Rehearsal. Working Paper #283. Parsons Research Center, Parsons, Kansas, 1972.

Lent, J. R., et al. Direction Following of Retarded and Nonretarded Adolescents. Working Paper #280. Parsons Research Center, Parsons, Kansas, 1972.

Keilitz, I., D. J. Tucker, and R. D. Horner. Increasing Mentally Retarded Adolescents' Verbalization About Current Events. Working Paper #278. Parsons Research Center, Parsons, Kansas, 1972.

Horner, R. D. Multiple Probe Technique: A Variation of the Multiple Baseline. Parsons Research Center, Parsons, Kansas, in press.

Horner, R. D. and J. R. Lent. Field Trials of Procedure for Teaching Hair Rolling to Moderately Retarded Females. Parsons Research Center, Parsons, Kansas, in press.

Keilitz, I., Attention: general or selective. Perceptual and Motor Skills, Missoula, Montana, in press.

McLean, James E., David E. Yoder, and Richard L. Schiefelbusch. Language Intervention with the Retarded: Developing Strategies. Ed. Barbara M. McLean. University Park Press, Baltimore, 1972.

Lent, J. R., et al. "The Hansons." Case Studies in Mental Retardation. Dubuque, Iowa: William C. Brown Co., 1972.

8. STAFF UTILIZATION

During the grant year the curricular materials staff has remained divided into project teams, with one or more research assistants assigned to one or more programs under the supervision of either the Project Director, Assistant Director, or Research Associate.

Because of increased involvement of PSHTC and its University Affiliated Facility in field testing and validation of Project MORE programs, Project staff members have been able to devote more time to the monitoring of daily training sessions, a procedure heretofore prohibited by cost and distance. The increase in staff utilization in this endeavor is well worth the return in terms of valid, reliable training-session data.

During the third and the final quarter, Project MORE staff members have served in a training capacity for students and other professionals. The Assistant Director, the Research Associate, and Media personnel have served as faculty members and lecturers in Hospital In-Service Training Programs (HIST) and in two University Affiliated Facility (UAF) courses titled, "Survey of Mental Retardation."

Pat Lewis, a VISTA volunteer, has donated some of her time to the Project during the final quarter. She has been involved with the nonstaff testing aspects of program development.

Ingo Keilitz, Ph.D., will assume the duties of assistant director of the Project June 1, 1973, when Don Horner, the present assistant director, terminates his employment with the Project. Currently Dr. Keilitz is devoting two-fifths of his time to Project MORE and the balance to work as a behavior modification specialist with the Southeast Kansas Four County Mental Health Center. In conjunction with his other responsibilities, Dr. Keilitz instructs teachers, parents, counselors, and administrators in the use of behavior modification techniques which includes intervention strategies developed by Project MORE.

9. FUTURE ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

The basic objectives of the Project will be adhered to during the new grant year. The feedback and correction procedure built in to the Project's technology will serve to prevent a distortion of objectives and to improve the techniques of implementation. Implicit in the new technology is a search for innovation as well as for simple correction. Accordingly, both correction and innovation are represented in the future plans and activities of the Project.

The staff is currently addressing two key issues concerning the future of the Project. These issues are efficiency and relevancy. Systems planning allows a constant monitoring of activities for efficiency. Though there is no absolute standard for judgment of efficiency in terms of cost-benefit, it has become apparent that too much production time is consumed by the field testing of products (see Lent, Problems). Several alternatives are being considered which would allow greater efficiency, but retain sufficient validity. The next quarterly report will describe a proposed solution.

The relevancy issue pertains to the appropriateness of the programs selected for development. The needs and feasibility scale developed to aid in program selection has increased our ability to make selections, but it is not an absolute answer. This problem will be given highest priority during the coming quarter.

It has become apparent that the Project's dissemination efforts, though effective, have fallen short of real consumer education. The dissemination activities (described under Media sections herein) are aimed at creating consumer awareness rather than toward a detailed understanding of the programs and their purposes. In a few areas, such as reading, for which the need is generally assumed and the format familiar, consumer education is not a critical issue. However, many of the Project MORE programs are relatively unfamiliar in terms of content, methodology, and format.

One of the most effective vehicles for educating consumer groups is the work-

shop. During the past year it was proposed that a series of workshops be conducted in the immediate five-state region to educate groups of teachers, aides, and parents in the purposes and methods of the programs produced by the Project. Since such an activity falls outside the scope of the current project, the proposal was presented to the staff of the University of Kansas SEIMC. The SEIMC group agreed that such an effort was appropriate to their own aims and activities. Subsequently, a salaried position to implement this proposal was written into their own grant proposal. When funded, however, the position had been reduced to half time. In addition, budget cuts reduced the level of the position. In order to make this portion of the Project feasible, we have requested that the position be funded one-half from Project MORE funds and one-half from SEIMC funds. The person hired will spend most of the time at Parsons working with Project MORE staff to produce workshop teaching packages. The packages would include multimedia formats for presentation. When completed, the workshop packages would be field tested by this same person via consumer groups in the IMC region. The initial workshop would provide data for subsequent revisions. Later, other workshop packages, whose content would be selected by SEIMC staff, could be produced by the jointly funded staff person and the Media component of Project MORE.

One of the Project's growing needs is to share information with persons engaged in similar work. At this point in time there is too little written which is directly relevant to this kind of full-technology undertaking. Problems of design, development, mediation, staffing, funding, and marketing have been confronted and partially solved by different groups of investigators. Because the efforts are incomplete and in some cases tentative, the results have not been published. This does not mean, however, that the information is not useful to others confronted with the same general issues. It would be extremely valuable to meet with other project directors and share information and insights in a structured fashion. The Project has submitted a separate proposal to the Bureau of the Handicapped to facilitate this sharing through the publication

of its findings, and it would welcome other means of sharing as these might be suggested by the Bureau.

Funding will continue to be sought for an important additional Project venture during the new grant year. One already validated program will be selected by the Project staff to be mediated in the television format. Experimentally, then, this program will be produced on videotapes and will be tested on site at Parsons State Hospital and Training Center via a closed-circuit television system. The program will undergo revision, according to the data collected from the in-house programing, and will then be broadcast, if funds can be found, via Community Antenna Television to a demographic area for which a needs-assessment survey will have already been completed. An evaluation instrument will be designed to retrieve data and information regarding the program so broadcast. Overall results of this pilot effort, in terms of cost-benefit and efficiency, will determine whether the Project will propose that other programs be mediated via television systems in future grant years. *The Project has determined that this particular extension of its programing and dissemination activity is quite feasible since its Parsons site already has closed-circuit capabilities, studio facilities, and experienced staff; the additions to overall Project budget and work-load can be kept to a minimal level appropriate for a pilot venture.*

This pilot project may accrue far-reaching significance: there has been no such effort in the television medium designed specifically for teaching self-help skills to the retarded, and the new technology necessary to the pilot effort will be of value to the entire educational arena. Regardless of the extent of impact on the target population the technology of program implementation will be transferable to other populations who do not require the "overteaching" and sequencing of miniscule behaviors that the trainable retarded must have. A new technology is often ahead of its field--and the development of programing for a retarded audience, requiring the tight design and step-by-step sequencing of instruction,

provides a valuable probe for the effectiveness and efficiency of the medium, the method, and the programing itself. This sort of pilot scrutiny could reveal the parameters of the technology itself and establish a model in order that the field may then utilize the discoveries toward the full utilization of the new technology.

1. MAJOR ACTIVITIES AND ACCOMPLISHMENTS

Activities for the past grant year have emphasized development and refinement of four articulation intervention programs. Each of the programs is designed to remediate articulation errors (based on the entry performance of the child) or, in one case, to provide information about the nature of articulation errors and the training program for supportive personnel. Activities and accomplishments in each of the four research areas are discussed below.

Stimulus Shift Generalization Programs. Training procedures for seven phonemes were placed in a manual format and evaluated for effectiveness. Two studies have been completed with public school children. Each study resulted in refinements in the tested procedure and the evaluation of those refinements. Reliability has been established on those procedures. Retarded, institutionalized children are involved in similar studies with procedural modifications being made to meet their unique learning needs (see McLean/Raymore, Problems).

The third study completed January 31, 1973, was designed to evaluate the prototype procedure with public school children. To investigate more efficient procedures once program effectiveness has been assured, two techniques will be examined. Materials, manuals and stimulus materials for the efficiency studies are being prepared; the studies are scheduled to begin March 1, 1973.

Phoneme Boundary Programs. To counteract the effects of over-generalized phoneme responses, Phoneme Boundary training was added to each of the seven Stimulus Shift programs. Results of research during the past year indicated a need for such programing in a separate format from that of the original Stimulus Shift Program. The newly constructed programs in manual form are presently under pilot investigation with recommended changes being made and recorded for future modification.

Parent-Aide-Paraprofessional (PAP) Program. To accomodate increasing articulation caseloads, the use of paraprofessional personnel has become necessary. In order to train such persons, a program of instruction was developed and evaluated in a pilot study. The results of the study identified components of the training and research procedures which required modification. These modifications, when completed, will be evaluated formally in September 1973.

Response Development. Programs for six phonemes were constructed to assist children who were unable to imitate correct phoneme production either in words (entry criterion for the Stimulus Shift Program), nonsense syllables, and/or isolation. A pilot study with public school children revealed general effectiveness of the programs and indicated areas which require alternative steps and/or modification. The programs, placed in a manual format, are presently under formal study with public school and retarded, institutionalized children.

In each of the above programs, excepting the PAP program, studies are nearing completion (see McLean/Raymore, Problems). In each case, the following components are being evaluated: training procedure, training stimuli, and manual format.

2. PROBLEMS

The most significant problem encountered by staff members of this Project involved postponement in completion of various aspects of the research programs. In each of the four research areas, the schedule of completion has been affected by one or combinations of the following (solutions to the problems are also noted).

The number of staff members involved in the research programs has proved inadequate for efficient and effective management of the various programs under investigation. Solving the problem has called for emphasis on one research component, rather than all four components, until satisfactory results are obtained.

In addition, data collected from the programs have indicated that the retarded, institutionalized children being trained on the Stimulus Shift Generalization program have not demonstrated sufficient phoneme generalization for termination of training. Empirical evidence suggests the presence of a universal language and phonological code with regard to the speech of retarded, institutionalized children. Although such children are taught the phonological code of the "normal-speaking" adult, a separate phonological code appears to prevail with institutionalized peers. A possible solution may rest in the involvement of the institutionalized, retarded child in training at the resident site with peer involvement.

Inadequate funding for travel and incentive purposes has also been a problem during the last year. Increased funds in both categories were requested in the recently submitted "Continuation Proposal" report.

Finally, programs have been behind schedule regarding readiness for pilot packaging, (i.e., film strip transfer, completion of a demonstration film). This was caused by insufficient staff and the need for additional evaluation

time for program validation. The problem should be solved when concentration is changed to one research component utilizing a staff of three for a one-year research period.

3. SIGNIFICANT FINDINGS AND EVENTS

Significant findings during the past grant year occurred in four research areas. These findings are summarized below.

Stimulus Shift Generalization Programs. Research findings from the February - May 1972 research period indicated that the training programs were effective in the generalization of phoneme responses to conversation in untrained situations with 81.6 percent of the research subjects (public school children in grades K-4). To increase further effectiveness, program and manual modifications were made from June - September 1972; these modifications are under investigation at the present time. The termination of the study is contingent upon the completion of the program by the majority of the 17 public school subjects (grades K-3). Findings, while imcomplete at this writing, indicate program effectiveness with a majority of the research subjects.

Phoneme Boundary Programs. Early Phoneme Boundary programs, designed to counteract the effects of overgeneralization, were evaluated as part of the Stimulus Shift Generalization program. The results of that study (May 1972) revealed a need for separate, more inclusive programing for public school and retarded, institutionalized children. By September 1972 seven programs, compatible with the Stimulus Shift programs, were written and mediated in manual form. Stimulus materials (slides) were prepared for use with the manuals in a study designed to investigate the effectiveness of the programs. This study was initiated in October 1972 with public school subjects. While the data are imcomplete at this writing, the results appear to indicate

a) appropriate separation of the Stimulus Shift and Phoneme Boundary programs to allow more complete programing and

b) a need for a larger number of stimulus items for each contrasting phoneme to permit in-depth phoneme discrimination.

Parent-Aide-Paraprofessional Program. As the need for paraprofessional

support became more apparent, a parallel need for effective paraprofessional training developed. Based on the recommendations and information gathered during pilot use of such persons (September 1971 through May 1972) a training program was written and placed in a manual format for pilot evaluation (October 1972). Results of this two-week pilot study revealed positive changes in the ability of the five subjects to make phoneme judgments; however, the percentage of reliability was relatively low, indicating a need for revision of portions of the program format. Minor manual format changes were recommended by the research subjects. General awareness of phonemic responses and of the stimulus shift training procedure was significantly improved. These modifications and plans for formal evaluation are being made at the time of this writing.

Response Development Program. Programs were constructed for pilot evaluation of the training procedure. The pilot data indicated general program effectiveness with public school and retarded, institutionalized subjects. The status of phoneme availability on an initative basis changed from nonstimulability and ineligibility for entry into the Stimulus Shift Generalization program to stimulability in words and eligibility for Generalization training (May 1972). By September 1972, all Response Development programs had undergone extensive revisions (i.e., addition/deletion of alternative training steps, inclusion of moto-kinesthetic techniques, and identification of specific program objectives) and were mediated in a manual format. Formal evaluation of the revised programs in manual form is now proceeding with public school and retarded, institutionalized subjects. The data, while incomplete at this writing (scheduled completion date, January 31, 1973), indicate program effectiveness. The subjects who have completed Response Development training have demonstrated

a) presence of generalized phoneme responses to conversation,

b) levels of stimulability above the entry criterion for the Stimulus Shift Generalization program, and

c) less required training time for the Stimulus Shift program.

4. DISSEMINATION ACTIVITIES

During the first three quarters of the grant year, two manuscripts were printed for distribution to professional audiences. They are:

McLean, James E., and Raymore, Sandra. Programmatic research on a systematic articulation therapy program: Carry-over of phoneme responses to untrained situations for normal-learning public school children. Parsons Research Center Report No. 6, July 1972.

Raymore, Sandra, and McLean, James E. A clinical program for carry-over of articulation therapy with retarded children. In Language intervention with the retarded: Developing strategies. McLean, J. E., Yoder, D. E., and Schiefelbusch, R. L. (Eds.), University Park Press, October 1972.

Informational conferences were continued with public school personnel. In addition, information concerning the Project was distributed to superintendents and school principals from five counties in Southeast Kansas in preparation for field testing outside the Parsons area.

5. CAPITAL EQUIPMENT ACQUISITIONS

No capital equipment acquisitions were made during this report period.

6. DATA COLLECTION

During the first three quarters of the grant year, all raw data collection forms were revised according to therapist preference and program modifications. Procedures of data collection remained the same after the forms were revised.

Data collection sheets, made to supplement the manual package for public school instruction, were developed during this period. In addition, data from past paraprofessional participation was compiled. New evaluative techniques with accompanying forms were developed for the Parent-Aide-Paraprofessional program.

Data is being collected on all programs in the public schools. The anticipated completion date for data collection is January 31, 1973. Under evaluation are:

a) Stimulus Shift (second revised format and procedure);

b) Phoneme Boundary (first evaluation of the procedure), and

c) Response Development (first revised format and procedure).

7. OTHER ACTIVITIES

General planning for the use of film-strip stimulus presentations was completed during the first three quarters of the grant year. Procedures for the change from slide to film-strip stimulus presentation was considered and scripting for a demonstration film for the Generalization Component was prepared. Two films were proposed and film strip equipment was selected.

Jim Budde, systems analyst for the Bureau of Child Research and Project MORE, worked with the staff in developing implementation lattices as a prelude to breaking down each Project component into the functional steps needed for Project realization. The procedure led to better organization, communication, and improved overall efficiency for all staff members.

Additional assistance on the Response Development Component was provided by Dr. Ruth Clark, a consultant from the University of Denver, specializing in the moto-kinesthetic approach to phoneme development.

8. STAFF UTILIZATION

Several staff changes occurred during the grant year:

James E. McLean, Ph.D., co-principal investigator, assumed a nonsalaried position on September 1, 1972.

Sandra Raymore, M.A., joined Dr. McLean as a co-participating investigator on July 1, 1972.

Mary Shackelford, M.A., joined the full-time staff February 1, 1972. Her position terminated January 31, 1973.

Vivian Gorman was rehired September 1, 1972, to assist in data collection for the Stimulus Shift Generalization program in the public schools.

Shannon Bosley was hired November 1, 1972, on a temporary basis to assist in data collection for the Response Development Program in the public schools and with retarded children at Parsons State Hospital. Her position terminated January 31, 1973.

9. FUTURE ACTIVITIES

The over-all strategy for this portion of the Project will undergo modification during the 1973-1974 grant year. Rather than attempt concurrent research of the Stimulus Shift Generalization Program and the Response Development Program, research emphasis will be directed toward the completion of the Stimulus Shift package for public school children.

Specific emphasis will be placed on establishing program efficiency, completion of a demonstration film, transfer of stimulus materials from slides to film strips, and development and evaluation of a workshop package for professional and paraprofessional personnel. Detailed descriptions of each of these involvements may be found in the recently submitted "Continuation Proposal" report.

1. MAJOR ACTIVITIES AND ACCOMPLISHMENTS

Highlights of the activities of Media Support Services, including both audiovisual and print components, during the first three quarters of the grant year have been:

- Production of "The Shower Song" in both 16mm motion picture and 8mm cartridge formats was completed. This 12-minute color film demonstrates the systematic training procedures of the Showering Program.
- Slide presentations were prepared to demonstrate educational technology procedures. These presentations are being used at both conventions and workshops.
- A portable display of Project MORE products, including a rotating carousel, was assembled. The multimedia package is shown through a self-contained projection system on a continuous loop with rear-screen projection.
- The Hair Rolling Program was printed in final form and prepared for dissemination (see Distribution Agreement in Media, Dissemination Activities).
- The Feminine Shaving Program and The Face Shaving Program prototypes were produced. They await further revision before being released as completed program products.
- Several projects were developed to assist in the speech development programs. A program was prepared illustrating the physical manipulation of the student's mouth to assist him in the formation of sounds. A large number of 35mm slides were photographed for use as stimulus presentations. An initial script for the articulation package was completed and incorporated into a shooting script.
- Twenty-two separate manuals (7 Stimulus Shift, 7 Phoneme Boundary, 6 Response Development, Oral Awareness and Tongue Control, and Parent-Aide-Paraprofessional Manual) were designed and printed for use in public school settings.
- Format design was completed for the Eating Etiquette Program, the Telephone Usage Program, and several other programs in the planning stages.

•Rerecording of "The Toothbrushing Song" was accomplished to accomodate necessary changes in this program.

During the final quarter the audiovisual component has been involved in a variety of activities preparatory to the new grant period. Considerable time has been devoted to the conceptualization of the continuation proposal, specifically in regard to the CATV project. In addition, the department has developed a variety of black and white and color still photographs for use in the development of the Appropriate Mode of Clothing, Eating Etiquette, Toothbrushing, and Telephone Usage Programs. These photographs are utilized in each program in various ways, and they require several reshootings as each program format evolves.

Major activities of the Project's print-production unit during the last quarter of this grant year have been the production of the Toothbrushing Program and the Eating Etiquette Program in formats for full-scale field testing. THE TOOTHBRUSHING PROGRAM IS APPENDED TO THE OFFICIAL COPIES OF THIS PROGRESS REPORT.

In addition, arrangements and work-ups for the final production of the Hair Rolling Program were completed with the Extramural Independent Study Center at the University of Kansas; this program will, at the time of transmission of this report, be in the hands of the Project's distribution outlets.

Other activities, in line with the Project's cooperative ventures with University Affiliated Facility activities and Hospital instructional programing, include the following for the grant year up to and including this last quarter:

Early Education Proposal
Flow Chart
Organization Chart
Flow Charts (UAF)
Statements
PSHTC Trademark
UAF Building Blueprints
HIST Diploma
Summary Form
Brochure
Forms
Forms and Information Sheets

Effects of Dosage
Child Development Brochure
Trial Monthly Summary Forms
UAF Training Brochure
UAF MR Course Brochure
UAF MR Course News Releases
UAF Slide Show
UAF MR Course Brochure (Reprint)
HIST Workshop Brochure
PSHTC Grounds Guide
UAF Grant Proposal (CAN) charts
Maturity Scale
12-County Maps
Placards for Stein Workshop
UAF Course Brochure
UAF Course News Releases

During this quarter, three brochures were produced for UAF components. The brochures include "A Workshop on Recreational Programs for the Handicapped," A Survey of Mental Retardation," and "Child Development Services." Media is also cooperating with Marguerite Thorsell, of the State Department of Education, in the production of a sample multimedia instructional unit.

2. PROBLEMS

Major problems faced by the Media Support Services of Project MORE during the past year have been relatively few, but by no means minor.

Expanding print-production and audiovisual components pointed up the need for increased space. The problem was solved, however, with the opening of the new University Affiliated Facilities building on the Parsons campus. The audio-visual unit moved their offices and equipment to a specially built studio in the new building. This allowed the print-production unit to occupy the space released by audiovisual. The expansion, coming about in the midst of a self-study, created an opportunity to make more efficient plans for distribution and flow-of-work activity for print-production.

Organizational problems, caused by the fact that several people with complementary skills must be involved in each project, were solved by designating the editor assigned to each specific product to be responsible for full-production coordination.

As pointed out in the Quarterly Progress Report of December 1, 1972, much of the print-production equipment is inadequate for growing needs and for more versatility. Demands on the single press continue to increase, with down-time more frequently occurring in both the press and the collator. In addition, because of the limitations of the press, formats must conform to a maximum 9" x 13" area on 10" x 14" stock with no bleed-off, limiting layout and confining creative input of the program developers. Binding equipment is also inadequate since it is capable of handling only normal duplicating demands, not the demands of a producer of many prototypical training manuals for the mentally retarded and developmentally disabled.

The Media sections and the budget portions of the Project MORE Continuation Proposal outline potential solutions to these problems.

3. SIGNIFICANT FINDINGS AND EVENTS

Not Applicable

4. DISSEMINATION ACTIVITIES

Media Support Services has spent a good deal of time during this grant year in securing outlets for dissemination of Project MORE products. A distribution/dissemination plan was devised to allow Project MORE personnel to continue to control the quality and validity of programs, and, further, to provide an avenue for these products to reach the consumer for whom they were designed and produced.

A consultant in the marketing of educational materials visited the site during April and recommended that the Project begin activities directed at enhancing the consumer market for its products. The first priority was to decide on an appropriate label for the Project that could be used universally to identify all of the products developed by the Project. The acronym Project MORE (Mediated Operational Research for Education) was formulated as the Project identifier. This acronym has successfully undergone the trademarking process.

Charles Cartwright was promoted to the position of program dissemination editor, establishing the full-time utilization of a staff member for the purpose of implementing the marketability of and retrieving market data for Project MORE products. He contacted professional book exhibitors to make arrangements to have Project MORE products exhibited at conferences that Project staff members would be unable to attend. The Combined Book Exhibit of Briarcliff Manor, New York, and Academia Book Exhibits of Fairfax, Virginia, agreed to add Project MORE to their lists of exhibitors. These two book exhibit firms displayed Project products at conventions in Pittsburgh, Pennsylvania; Baltimore, Maryland; Oklahoma City, Oklahoma, and Frankfurt, Germany, during August and October.

Two conventions in October allowed Project staff members to display an exhibit of Project MORE products and to distribute a simple brochure about the Project. Cartwright and Dr. Casper Ferneti, Project MORE research associate, attended the 5th International Congress on Mental Retardation in Montreal, Canada. Several

Project staff members attended the Regional AAMD Convention in Hot Springs, Arkansas.

In May an exhibit displaying selected Project products was shown at the National AAMD Convention in Minneapolis, Minnesota. An important outgrowth of this exhibit and other presentations by Project staff members was the negotiation of a distribution agreement between the University of Kansas through the Extramural Independent Study Center, for Project MORE, and Psychologists and Educators, Inc., of Jacksonville, Illinois.

During the final quarter, the distribution agreement between the University of Kansas, through the Extramural Independent Study Center, for Project MORE, was approved by the administrations of both parties. Following the approval of the distribution agreement, five of the Project MORE programs were listed as available for consumers in the 1973 Education-Psychology Catalog of Psychologists and Educators, Inc., of Jacksonville, Illinois.

To aid the marketing of its products, Project MORE compiled mailing lists for the University of Kansas Extramural Independent Study Center and Psychologists and Educators, Inc. The lists included the addresses of those interested in the Project MORE products gathered from three major sources:

1) from replies to a brochure on Project MORE;

2) from letters of inquiry to the Project; and

3) from a list compiled at the 1972 National AAMD conference in Minneapolis.

By far, Project MORE has received the largest indication of interest from hospitals and training centers for the developmentally handicapped. The second largest area of interest has been the departments of mental health and education of various states, including Minnesota, Texas, Delaware, New York, and Nebraska.

Copies of the Hair Rolling Program were distributed to members of the CEC Governmental Relations Committee. As a result, a letter was received from William F. Ohrtman, director of the Bureau of Education in Pennsylvania. A copy of that

letter is enclosed herein.

Project MORE's developmental copyright authorization agreement requires that the Project use its two-year marketing period as a means to further improve its products. To accomplish this, Project MORE has included in each copy of the Hair Rolling Program to be marketed a postage-paid form to be completed by the teacher of the program. The form contains information that will be vital in determining the effectiveness of the program when used in a variety of settings and environments.

DISTRIBUTION AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 1972, by and between THE UNIVERSITY OF KANSAS, of Lawrence, Kansas (hereinafter called the "University") and PSYCHOLOGISTS AND EDUCATORS, INC., of Jacksonville, Illinois (hereinafter called the "Distributor"):

WITNESSETH:

WHEREAS, the University, through its Bureau of Child Research facilities in Parsons, Kansas, has developed materials for the education of handicapped children in the performance of certain personal skills under a program known as Project MORE, funded by a grant from the United States Office of Education; and

WHEREAS, the University's Bureau of Child Research has made arrangements with the University's Extramural Independent Study Center for assistance in the production and distribution of said materials; and

WHEREAS, it is desirable and in the best interests of the University to avail itself of the distribution facilities of the Distributor in order to obtain a wider market for said materials; and

WHEREAS, the University has received the approval of the United States Office of Education for exploring the effectiveness of the distribution process contemplated hereunder;

NOW, THEREFORE, in consideration of the mutual promises herein made, the University and the Distributor agree as follows:

1. The University grants to the Distributor the non-exclusive right to distribute the following Project MORE materials:

a. The Hair Rolling Program
b. The Face Shaving Program
c. The Feminine Shaving Program
d. The Showering/Bathing Program
e. The Ironing Program

and the University, through its Extramural Independent Study Center, will produce and forward to the Distributor, freight collect, sufficient supplies of said materials to meet the demand for said materials as estimated from time to time by the Distributor. Since only The Hair Rolling Program is presently available for distribution, the University's obligation to produce and forward hereunder the balance of said materials is contingent upon the University's validation of said materials by field test.

2. The Distributor agrees to advertise said materials in the Distributor's general catalogue, to prepare supplemental fliers for the promotion of said materials, and otherwise to use its best efforts to secure the widest possible distribution of said materials.

3. The following prices to the Distributor are agreed upon as necessary to cover currently anticipated costs to the University of production of said materials, and the University agrees to the following corresponding Distributor's sale prices:

	Price to Distributor	Distributor's Sale Price
a. The Hair Rolling Program	$ 2.50 ea.	$ 5.00 ea.
b. The Face Shaving Program	2.00	4.00
c. The Feminine Shaving Program	1.75	3.50
d. The Showering/Bathing Program	2.00	4.00
e. The Ironing Program	2.00	4.00

Prices to the Distributor are subject to change upon ten (10) days advance written notice from the University to the Distributor, and the University agrees that, in such event, the Distributor will be empowered to make comparable adjustments to its sale prices.

4. Said materials shall be received by the Distributor on consignment, the Distributor to be obligated to account periodically, and in no event less than quarterly, to the University for materials resold, and the Distributor to have the continuing right, at its expense, to return all unsold materials to the University. The Distributor shall be responsible for all risks of loss or damage to the materials in the possession of the Distributor.

5. Either the University or the Distributor shall have the right, upon at least thirty (30) days prior written notice, to terminate this Agreement as of the date specified in said notice. In addition, if the United States Office of Education should notify the University of its withdrawal of funding support for Project MORE or of its formal disapproval of the distribution of said materials, the University shall have the right to terminate this Agreement by written notice to the Distributor, the effective termination date to be the date the Distributor receives such notice. In the event of any such termination the Distributor shall, at its expense, return to the University all of said materials in its possession except such as may be necessary to fill current orders then in the process of being filled by the Distributor, but this exception shall not apply if it is inconsistent with the terms of the United States Office of Education's formal disapproval of distribution of said materials.

6. As required by K.S.A. 1971 Supp. 46-901(c), notice is hereby given to all parties to this Agreement and to others who may be interested therein that, as provided in K.S.A. 1971 Supp. 46-901(a), the State of Kansas, its boards, commissions, departments, agencies, bureaus and institutions, and all committees, assemblies and groups authorized by constitution or statute to act on behalf of or for the State of Kansas, are immune from liability and suit on an implied contract, or for negligence or any other tort. No provision of this Agreement constitutes a waiver of such immunity.

IN WITNESS WHEREOF, the University and the Distributor have, by their duly authorized officers, hereunto set their hands as of the day and year first above written.

THE UNIVERSITY OF KANSAS

By: _____
Vice-Chancellor for Research
and Graduate Studies

Approved:

Bureau of Child Research

By: _____
Director

PSYCHOLOGISTS AND EDUCATORS, INC.

By: _____
President

Extramural Independent Study Center

By: _____
Director

Approved as to Substance and Form:

_____
University Attorney

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF EDUCATION
BOX 911, HARRISBURG, PA. 17126

January 5, 1973

Mr. Charles Cartwright
Program Dissemination Editor
Bureau of Child Research
University of Kansas at Parsons
State Hospital and Training Center
Parsons, Kansas 67357

Dear Mr. Cartwright:

A copy of the HAIR ROLLING PROGRAM was received by me as a member of the CEC Governmental Relations Committee.

I found it to be quite well done both in content and format. Because of its worthwhile nature, I am bringing it to the attention of others.

Sincerely yours,

William F. Ohrtman

William F. Ohrtman
Director
Bureau of Special Education

5. CAPITAL EQUIPMENT ACQUISITIONS

Capital equipment acquisitions for the grant year include:

1 El Nikkor Enlarging Lens	$ 55.00
1 Metal Typewriter Stand	23.25
2 IBM Selectric II Dual Pitch Typewriters @ $530.00 ea.	1,060.00
1 Video Waveform Monitor	914.00
3 Twin RF Monitors	1,432.00
1 Docuflex 35mm Camera Filmstrip System, complete reprovit slide duplication system	435.71*

*Total price of this unit was $3,599.20: $1,745.10 was supplied by McLean/Raymore and $1,418.39 was supplies by Lent.

6. DATA COLLECTION

Not Applicable

7. OTHER ACTIVITIES

Several activities by staff members and production teams supplemented the major activities for Media Support Services during the first three quarters of the grant year.

Bill Mauk, Media production coordinator, represented the Media group at the combined meetings of the Association of University Affiliated Facilities and the American Association on Mental Deficiency in May. He presented a workshop on the applications of the television medium in research and training of the handicapped, and participated on a panel of media personnel discussing the formation of a media organization within the AAMD structure.

Karen Brown, writer/editor, attended the fall meeting of Missouri Press Women in Kansas City, Missouri, and the Annual National Meeting of Women in Communications in Houston, Texas, during October. At both meetings she was able to make presentations for Project MORE.

The combined Parsons State Hospital and Project MORE audiovisual staff completed a motion picture titled "Graduation Day," describing the programs and systematic training being used in the hospital's Title One Program for younger severely and profoundly retarded children.

Another motion picture, The Temporal Parameters of Operant Audiometry, was scripted and recorded on motion picture film for the Research Center and Speech and Hearing Department.

Production of The Temporal Parameters of Operant Audiometry has continued during the final quarter. Preparation for the animation sequences has been delayed due to some procedural changes in the animation department of the film laboratory. The film is scheduled for release this quarter.

The audiovisual department is in the prescripting and preproduction planning stages for a training film for the Kansas State Department of Special Education.

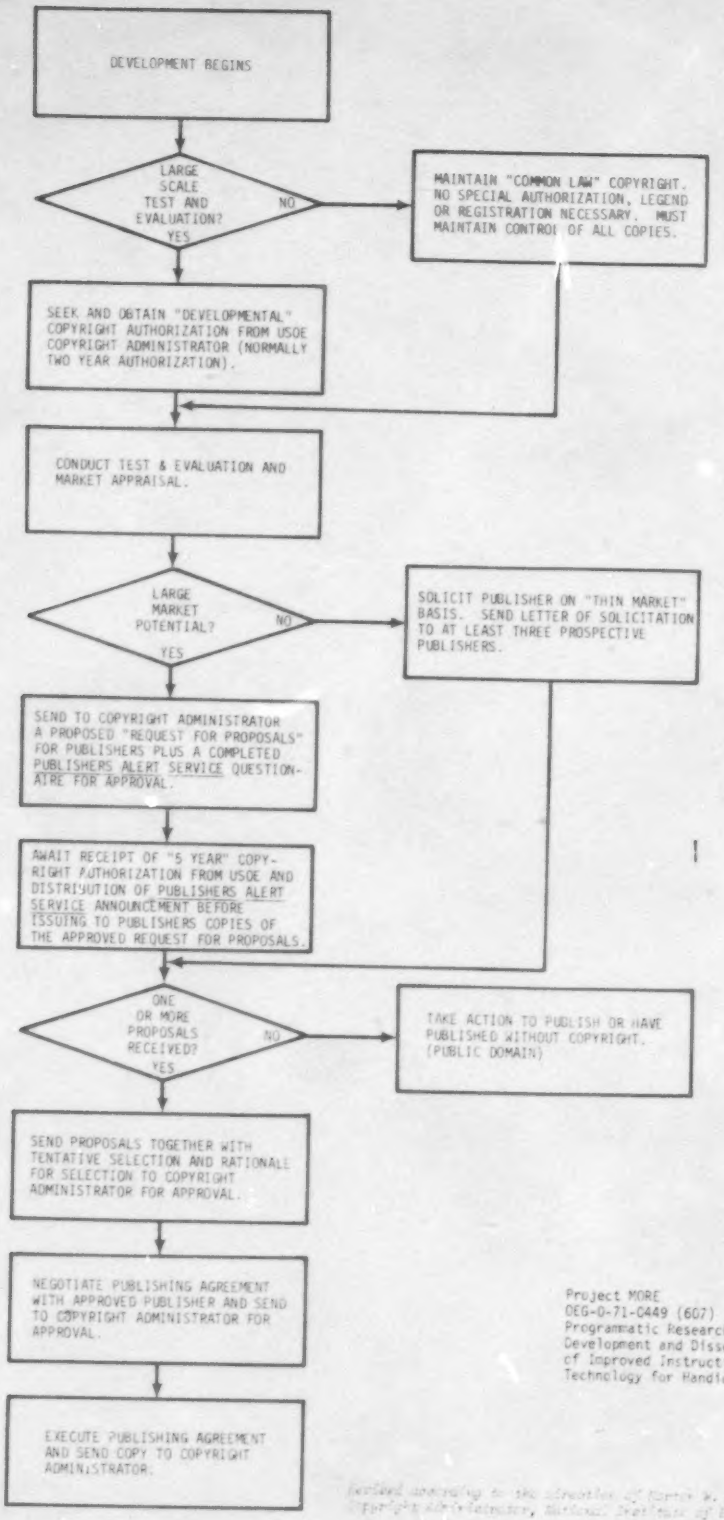
The film will document model preschool through secondary programs for TMR/EMR in Kansas. The production coordinator is assisting in this effort in line with cooperative activities planned for next year between Project MORE and the department.

The Instructional Media Analyst, along with the Project Director, attended the meeting of the State Directors of Special Education in Washington, D.C., November 28, 29, and 30, where they exhibited and discussed Project MORE products. They also went to Columbus, Ohio, on December 1, where they consulted with the National Center for Educational Methods and Materials on issues related to the capabilities and services of the center.

While they were in Washington, they also talked with Morton Bachrach, USOE/NIE copyright administrator, regarding guidelines for Project MORE's continuing dissemination activities. Bachrach added his suggestions and corrections to the Project's illustrative flow chart of these procedures and protocols. The amended chart follows herein.

The following articles by Media personnel were published during the last grant year:

Cartwright, Charles J. "The Black Student and the American Dream." Equal Opportunity Magazine, September 1972.


DEVELOPMENT BEGINS
LARGE SCALE TEST AND EVALUATION?
NO
YES
MAINTAIN "COMMON LAW" COPYRIGHT. NO SPECIAL AUTHORIZATION, LEGEND OR REGISTRATION NECESSARY. MUST MAINTAIN CONTROL OF ALL COPIES.
SEEK AND OBTAIN "DEVELOPMENTAL" COPYRIGHT AUTHORIZATION FROM USOE COPYRIGHT ADMINISTRATOR (NORMALLY TWO YEAR AUTHORIZATION).
CONDUCT TEST & EVALUATION AND MARKET APPRAISAL.
LARGE MARKET POTENTIAL?
NO
YES
SOLICIT PUBLISHER ON "THIN MARKET" BASIS. SEND LETTER OF SOLICITATION TO AT LEAST THREE PROSPECTIVE PUBLISHERS.
SEND TO COPYRIGHT ADMINISTRATOR A PROPOSED "REQUEST FOR PROPOSALS" FOR PUBLISHERS PLUS A COMPLETED PUBLISHERS ALERT SERVICE QUESTIONAIRE FOR APPROVAL.
AWAIT RECEIPT OF "5 YEAR" COPYRIGHT AUTHORIZATION FROM USOE AND DISTRIBUTION OF PUBLISHERS ALERT SERVICE ANNOUNCEMENT BEFORE ISSUING TO PUBLISHERS COPIES OF THE APPROVED REQUEST FOR PROPOSALS.
ONE OR MORE PROPOSALS RECEIVED?
NO
YES
TAKE ACTION TO PUBLISH OR HAVE PUBLISHED WITHOUT COPYRIGHT. (PUBLIC DOMAIN)
SEND PROPOSALS TOGETHER WITH TENTATIVE SELECTION AND RATIONALE FOR SELECTION TO COPYRIGHT ADMINISTRATOR FOR APPROVAL.
NEGOTIATE PUBLISHING AGREEMENT WITH APPROVED PUBLISHER AND SEND TO COPYRIGHT ADMINISTRATOR FOR APPROVAL.
EXECUTE PUBLISHING AGREEMENT AND SEND COPY TO COPYRIGHT ADMINISTRATOR.

Project MORE
OEG-0-71-0449 (607)
Programmatic Research for the
Development and Dissemination
of Improved Instructional
Technology for Handicapped Children

Drafted according to the direction of Harry W. Hoogstad,
Copyright Administrator, National Institute of Education, 1975.

8. STAFF UTILIZATION

Several staff changes in Media Support Services were made during the first three quarters of the grant year.

Larry Thompson joined the audiovisual department as director. Although he is a member of the Project MORE staff, his position is funded by Parsons State Hospital and Training Center.

Karen Brown joined the print-production staff in August as a writer/editor.

Joe Crabtree was employed in the audiovisual department to assist in the installation and maintenance of television and audio equipment, as well as to serve as sound-recording engineer in motion picture production. Robert Pierce joined the audiovisual staff as a still photographer and motion picture cameraman. They are both funded through the University Affiliated Facility program, SRS Grant #59-P-35116/7-01.

Sandra Grafton was temporarily employed as a writer/editor during the summer months. She was specifically assigned the preparation of study guides and workshop packages for research personnel and University and IMC instructional activities. This activity evolved into a full-time position, jointly funded by IMC and Project MORE, which she assumed January 1, 1973.

Charles Cartwright, who joined the staff as an editorial assistant during the last grant year, was promoted to program dissemination editor.

9. FUTURE ACTIVITIES

The Media groups will continue to produce prototypical materials for the Curriculum Development and Speech Articulation, research personnel according to each of their production and validation schedules. While this makes for a heavy workload, the Media personnel will be able to continue to engage in limited service activity to other affiliated researchers.

Dissemination activities will, during the coming grant year, become increasingly more efficient--since the agreements and procedures have not been finalized and approved. Market analysis will be the primary focus of this activity during the next year. Various instruments and processes for consumer feedback have been devised and will be made operational. In addition, mailing lists have been and will continue to be categorized and updated so that respondents can be easily referred to appropriate materials and training activities.

Another major thrust of Project activity which will affect dissemination potential will be the new areas of this training activity--specifically, workshops. Professionals, both preservice and in-service, and paraprofessionals, including parents, will be brought into contact with Project activities as these result in validated products. These persons will contribute replicability-quotient information regarding programs as they are instructed, via workshop packages, in the use of Project programs. Media personnel will be heavily involved with the conception, production, and dissemination of these training packages. The Workshop Director (see Lent, Future Activities) will work closely with the program development and Media personnel as well as the KU/SEIMC personnel in the creation of the workshop packages; this person will, in fact, coordinate the entire training activity.

The Project administration has determined that a new direction--the release of materials already validated in one medium through another medium, cable television--is worthy of exploration and evaluation, providing that sufficient funding for the new venture can be found.

The Project has decided that this new direction of dissemination should be investigated *experimentally*. The new venture, *will not be construed to be a measurement of one medium's success as opposed to another medium's success* with presentation of program materials. Since the programing design of Project MORE's materials *must be validated* before they are released, it would not be appropriate to assume that an adoption of these materials to another mediational format would significantly alter the program's validity.

Although the primary audience for Project MORE programing will continue to be the trainable retarded, the CATV pilot program (see Lent, Future Activities) may conceivably extend the secondary audiences for the Project considerably. While the sequencing of behaviors toward the target skill development in the retarded population must determine program content and design, there are many "casual" audiences for whom the programing, though not necessarily the detailed design of the program content, would be beneficial and contributive. These audiences include hospitalized patients, persons in convalescent or nursing homes, preschool normal children, children in Head Start or other enrichment programs, and those persons who are under confinement temporarily or for long periods of time who span a wide range of age and deficit categories.

The objective implicit in the entire effort of Project MORE--assuring that instructional technology for the handicapped be effectively and efficiently delivered to its intended consumer--will be faciliated to the utmost during the new grant year by the exploitation of market data along with the training potential now possible because product development has become a reality.

1. MAJOR ACHIEVEMENTS AND ACCOMPLISHMENTS

Systems Planning. Since the conception of Project MORE, systems technology has been used as an integral part of planning. Project directors were responsible for determining research goals. Then goals were integrated into objectives and broken down into subobjectives via systems analysis. Once the activities were specified, these were recorded on systems blueprints, lattices (program blueprints), or loading charts (scheduling blueprints).

In the initial months objectives and activities remained somewhat a tract, but, with the aid of systems planning they were placed in sharp focus. Some of the activities determined through analysis were ineffective and needed to be modified. With each modification the system became more effective and efficient until program and implementation blueprints became relatively precise tools. At this point program efficiency and effectiveness was stabilized.

Staff development is as important as the systems techniques used. In the beginning the staff had difficulty adjusting to this methodology. As they were trained and as they used the techniques, the staff came to recognize the importance of systems planning. At this point the staff used the techniques to increase their overall planning effectiveness and efficiency. As objectives were assigned to them, they used lattices to break down their objectives into program components. They began to use loading charts to estimate time and resources to complete objectives, thereby by establishing criteria for their own performances.

Because objectives and activities were recorded on lattices and loading charts, precise planning instruments were available to administrators and staff as well. With these plans, objectives were no longer abstract. Objectives were specific targets for which individuals were responsible. The criteria for action and evaluation were established, reducing ambiguity both in terms of tasks and time.

Perhaps the greatest secondary effort concerning systems planning was that of communication and working relationships. Because objectives were specified by the personnel at the level of their responsibility, the staff were able to use creative talents to plan their products. This process included reviews by coworkers and adminstrators until plans or designs were complete. As a result innovative ideas were exchanged and the staff recognized the scope and the relationship of each others work.

Systems Operation. Once the basic implementation systems was recorded, research and development activities were initiated actively and need for supervision was minimized. The staff performed according to plans, monitored their programs, notified the administrator when input was needed or when discrepancies occured. At this point management by exception was operational.

It might appear that all would run smoothly once management by exception was operationalized. This is a gross understatement. Because of the limited knowledge concerning research and development, the best plans are often incomplete. As discrepancies were determined in programs, either through research or in implementation through application, modifications were made. The point is not that plans are precise and accurate, but that a system exists that is easily adaptable to change when change is needed. Because of the dynamics of this type of system, a high degree of precision, for a research and development project, has been attained.

Selection of products for education of the handicapped can be a complex problem. A requirement of the operational system is to determine both the need and feasibility of product development. Initially products are rated on need and feasibility. At this point products undergo initial design. From the design, which includes a breakdown of program components and their teaching sequence, loading charts are constructed. At this point time estimates and resources for product development provide the administrator with decision making data. By analyzing the estimates and comparing them with existing resources and time

schedules, the administration may either reduce the scope of the project, accept it, or abort it. This phase reduces the probability of developing products which are more costly and increases the probability of developing products which are of more benefit to the intended population. In the long run the researcher develops more programs for less money.

Testing and modification is a continuous process. After each test the operational system is designed to provide feedback for product modification. Videotapes are used to record data and observer check lists and session-by-session analysis forms are constructed for each program so that data is retained and/or fed back for product modification. Products are tested and modified during the staff test, nonstaff test and field test.

Research procedures are built into each test phase insuring the quality of each test. The testing component of the operational system illustrates how research can be conducted systematically and according to schedule. The merging of research and systems technology facilitates quality research while increasing project efficiency and effectiveness.

Staff development has been an integral component of systems operations. As new staff are added or replaced, they are trained by staff or administrators. Because manuals have been developed for research, media personnel job tasks are specified in terms of objectives or activities to product products. Supplementary software such as the implementation manual and check list and Media order form were developed to provide product flow and quality control within the operational system. This process also enables the staff to make a quick transition into a new job.

System Evaluation. In any planning system a standard for evaluation must be provided. Each product can be evaluated in terms of behavioral gains in subjects. Staff and administrative performance can be evaluated on the basis of projected estimates. Some comparisons can be made across projects. This type of evaluation

can be made both in the Media and research components.

Presently, Media provides cost data for product mediation. The feasibility of developing cost data for product research has been examined and at this time does not appear feasible to integrate the costing component. Rather, evaluative efforts have produced a need for refinements in the operational system that are more efficient. It has been determined that the level of effectiveness needed has been reached, but systems evaluation will now be used to reduce costs.

2. PROBLEMS

One of the major problem areas is resolving the high cost of research. Because there are currently no other systems with which to compare products or outputs, the Project must evaluate itself according to past performance. Developing validated educational products is a costly process. However, reduction in costs can lead to inferior products. Therefore, new alternatives must be sought to produce validated products more economically. These alternatives will need to be compared to present procedures to determine cost effectiveness. This process is costly in time, resources, and personnel.

Because the operational system has stabilized, it will be possible to modify portions of it without affecting the entire system. Presently, objectives on the implementation lattice are being evaluated and alternatives to reduce costs are being considered. This process is worthwhile and necessary.

3. SIGNIFICANT FINDINGS

The most significant finding is that of the operational system itself. Over the past year, research procedures and systems techniques have been molded into a research and development system. This system insures quality of product as well as administration. It illustrates the fact that research personnel can use systems techniques hand-in-hand with research procedures to improve the quality and delivery of research products. With technical assistance administrators as well as research assistants can use the blend of techniques and procedures as on-going activities.

4. DISSEMINATION ACTIVITIES

The dissemination of products to consumers is the highest priority objective. During the next year systems analysis will be used to define the dissemination phase more clearly and improve operational effectiveness. Subcomponents and the flow of products to consumers will be recorded on a lattice. As demand increases scheduling techniques may be applied.

Dissemination of information concerning Project MORE is of overriding importance. Systems personnel will be used to plan dissemination activities and act as participants. In May a program will be presented at AAMD. Other written documentation in the form of a how-to-do book is in the planning stages.

Systems techniques have already been used to plan dissemination via CATV. Should this portion of the grant be funded, systems personnel will need to provide technical assistance in designing, developing, and implementing this portion.

5. CAPITAL EQUIPMENT ACQUISITIONS

Not Applicable

6. DATA COLLECTION

Not Applicable

7. OTHER ACTIVITIES

Not Applicable

8. STAFF UTILIZATION

Not Applicable

9. FUTURE ACTIVITIES

The major thrust of activities in the future will concern improving the research implementation or operational system. Although this process has been initiated, some time will be required to test alternatives and modify the system. The majority of this time will be spent in conducting sessions with the staff so that their input is used in conjunction with systems analysis.

A search for procedures to be used in developing improved evaluative techniques has been initiated. Although standards exist for evaluation and data is available, improved techniques to compare data and illustrate results are needed. There is some controversy in the area of cost effectiveness and cost benefit, and few techniques are applicable to behavioral science.

Softwear used throughout the Project will need some refinement, depending on expansion and modification. Softwear will need to be developed for the CATV component and for dissemination. Media softwear needs to be finalized and the research implementation manual will be modified as needed.